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BEFORE THE ARIZONA CORPORATION COMMISSION

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ARIZONA CORPORATION COMMISSION
DOCKET CONTROL

COMMISSIONERS

BOB STUMP - Chairman
GARY PIERCE
BRENDA BURNS
BOB BURNS
SUSAN BITTER SMITH

IN THE MATTER OF THE APPLICATION OF
LITCHFIELD PARK SERVICE COMPANY, AN
ARIZONA CORPORATION, FOR A
DETERMINATION OF THE FAIR VALUE OF ITS
UTILITY PLANTS AND PROPERTY AND FOR
INCREASES IN ITS WASTEWATER RATES AND
CHARGES BASED THEREON FOR UTILITY
SERVICE.

DOCKET NO. SW-01428A-13-0042

IN THE MATTER OF THE APPLICATION OF
LITCHFIELD PARK SERVICE COMPANY, AN
ARIZONA CORPORATION, FOR A
DETERMINATION OF THE FAIR VALUE OF ITS
UTILITY PLANTS AND PROPERTY AND FOR
INCREASES IN ITS WATER RATES AND
CHARGES BASED THEREON FOR UTILITY
SERVICE.

DOCKET NO. W-01427A-13-0043

The Utilities Division ("Staff") of the Arizona Corporation Commission ("Commission") hereby files the Direct Testimony (except Rate Design) of Staff witnesses Darron W. Carlson, John A. Cassidy and Dorothy Hains in the above-referenced matter.

RESPECTFULLY SUBMITTED this 26th day of September, 2013.

Arizona Corporation Commission

DOCKETED

SEP 26 2013

DOCKETED BY

NR

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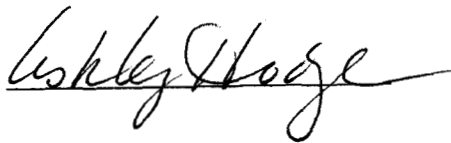
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BEFORE THE ARIZONA CORPORATION COMMISSION

BOB STUMP

Chairman

GARY PIERCE

Commissioner

BRENDA BURNS

Commissioner

BOB BURNS

Commissioner

SUSAN BITTER SMITH

Commissioner

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RATES AND CHARGES BASED THEREON)
FOR UTILITY SERVICE.)

DOCKET NO. W-01428A-13-0043

DIRECT

TESTIMONY OF

DARRON W. CARLSON

PUBLIC UTILITIES ANALYST MANAGER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

SEPTEMBER 26, 2013

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**EXECUTIVE SUMMARY
LITCHFIELD PARK SERVICE COMPANY
DOCKET NOS. SW-01427A-13-0042 AND W-01427A-13-0043**

Litchfield Park Service Company ("LPSCO or Company") is an Arizona "C" Corporation. Its principal place of business is 12725 W. Indian School Road, Suite D-101, Avondale, Arizona. The Company is engaged in the business of providing water and wastewater utility services in its certificated areas in portions of Maricopa County, Arizona. The Company served approximately 16,800 water customers and 16,160 wastewater customers during the test year ended December 31, 2012. The Company's current rates were approved in Decision No. 72026, dated December 10, 2010.

Rate Application:

Water Division

The Company-proposed rates, as filed, produce total operating revenue of \$13,458,550, an increase of \$2,257,160 or 20.15 percent, over adjusted test year revenue of \$11,201,390 to provide a \$3,387,127 operating income and a 9.50 percent rate of return on its proposed \$35,647,602 fair value rate base ("FVRB") which is its original cost rate base ("OCRB").

The Utilities Division ("Staff") recommends rates that produce total operating revenue of \$12,276,127, an increase of \$1,074,737 or 9.59 percent, over the adjusted test year revenue of \$11,201,390 to provide a \$652,686 operating income and an 8.10 percent return on the \$33,119,464 Staff-adjusted FVRB and OCRB.

Wastewater Division

The Company-proposed rates, as filed, produce total operating revenue of \$11,020,691, an increase of \$659,088 or 6.36 percent, over adjusted test year revenue of \$10,361,603 to provide a \$2,268,786 operating income and a 9.50 percent rate of return on its proposed \$23,877,697 FVRB which is its OCRB.

Staff recommends rates that produce total operating revenue of \$10,303,654, a decrease of \$57,949 or 0.56 percent, under the adjusted test year revenue of \$10,361,603 to provide a \$1,897,396 operating income and an 8.10 percent return on the \$23,424,640 Staff-adjusted FVRB and OCRB.

Rate Case items:

Staff recommends that in the future the Company correctly record plant additions in the correct month and year.

Other items:

Deferred Regulatory Asset:

Staff recommends increasing the Company's deferred regulatory asset by \$25,708.

Staff recommends that the Company correct its compliance filing report. Further, Staff also recommends amortizing the additional \$25,708 in deferred regulatory assets over 10 years.

Declining Usage Adjustment

Staff recommends approval of a 0.5 percent declining usage adjustment subject to the same conditions that are included in the Arizona Water Company – Northern Group filing.

Income Tax

Staff recommends that the Company:

1. Determine the amount of excess deferred income tax related to the change in State income tax.
2. Present a plan, within 60 days of a Commission decision in this matter, on how to refund any excess monies to rate payers.

Hook-up Fees

Staff also recommends approval of the Company's water off-site facilities hookup fee tariff, subject to certain conditions (see testimony of Staff Engineer Dorothy Hains).

Property Tax Accounting Deferral

Staff recommends denial of the Company's proposed property tax accounting deferral.

Adjustor Mechanisms:

Staff recommends approval of the Company's proposed Purchased Power Adjustor Mechanism ("PPAM") subject to certain conditions.

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Darron W. Carlson. My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Where are you employed and in what capacity?

A. I am employed by the Utilities Division ("Staff") of the Arizona Corporation Commission ("ACC" or "Commission") as a Public Utilities Analyst Manager.

Q. How long have you been employed with the Utilities Division?

A. I have been employed with the Utilities Division since September of 1991.

Q. Please describe your educational background and professional experience.

A. I hold a Bachelor of Arts degree in both Accounting and Business Management from Northeastern Illinois University in Chicago, Illinois.

I have participated in quite a number of seminars and workshops related to utility rate-making, cost of capital, income taxes, and similar issues. These have been sponsored by organizations such as the National Association of Regulatory Utility Commissioners ("NARUC"), Duke University, Florida State University, Michigan State University, New Mexico State University, and various other organizations.

Q. Briefly describe your responsibilities as a Public Utilities Analyst Manager.

A. In my capacity as a Public Utilities Analyst Manager, I supervise analysts who examine, verify, and analyze utilities' statistical, financial, and other information. These analysts write reports and/or testimonies analyzing proposed mergers, acquisitions, asset sales,

1 financings, rate cases, and other matters in which they make recommendations to the
2 Commission. I provide support and guidance along with reviewing and editing the work
3 products. I also perform analysis as needed on special projects. Additionally, I provide
4 expert testimony at formal hearings. Finally, I assist Staff members during formal
5 hearings and supervise responsive testimonies, as needed, during the hearing process.

6
7 **Q. What is the scope of your testimony in this case?**

8 A. I am presenting Staff's analysis and recommendations regarding Litchfield Park Service
9 Company's ("LPSCO" or "Company") application for a permanent increase in its rates
10 and charges for water and wastewater utility service within Maricopa County, Arizona. I
11 am presenting testimony and schedules addressing rate base, operating revenues and
12 expenses, revenue requirement, and rate design. Staff witness John Cassidy is presenting
13 Staff's cost of capital. Mrs. Dorothy Hains is presenting Staff's engineering analysis and
14 related recommendations.

15
16 **Q. What is the basis of your testimony in this case?**

17 A. Staff working under my supervision performed a regulatory audit of the Company's
18 application and records. The regulatory audit consisted of examining and testing financial
19 information, accounting records, and other supporting documentation and verifying that
20 the accounting principles applied were in accordance with the Commission adopted
21 NARUC Uniform System of Accounts ("USOA").

22
23 **Q. How is your testimony organized?**

24 A. My testimony is presented in nine sections. Section I is this introduction. Section II
25 provides a background of the Company. Section III is a summary of consumer service
26 issues. Section IV presents compliance status. Section V is a summary of the Company's

1 filing and Staff's rate base and operating income adjustments. Section VI presents Staff's
2 rate base recommendations. Section VII presents Staff's operating income
3 recommendations. Section VIII presents Staff's other issues, and Section IX presents
4 Staff's recommendations on adjustor mechanisms.

5
6 **II. BACKGROUND**

7 **Q. Please review the background of this application.**

8 A. LPSCO is an Arizona "C" Corporation. Its principal place of business is 12725 W.
9 Indian School Road, Suite D-101, Avondale, Arizona. The Company is engaged in the
10 business of providing water utility services in its certificated areas in portions of Maricopa
11 County, Arizona. The Company served approximately 16,800 water customers and
12 16,160 wastewater customers during the test year ended December 31, 2012. The
13 Company's current rates were approved in Decision No. 72026, dated December 10, 2010.

14
15 LPSCO is organized under the Liberty Utilities (South) segment of Algonquin Power &
16 Utilities Corp ("APUC"). APUC is an incorporated entity under the Canada Business
17 Corporations Act. APUC's principal activity is the ownership of power generation
18 facilities and water, gas and energy utilities, through investments in securities of
19 subsidiaries including corporations, limited partnerships and trusts which carry on these
20 businesses. The activities of the subsidiaries may be financed through equity
21 contributions, interest bearing notes and third party debt.

22
23 APUC's power generation business unit conducts business under the name Algonquin
24 Power Co. ("APCo"). APCo owns or has interests in renewable energy facilities and
25 thermal energy facilities representing more than 1,100 MW of installed electrical
26 generation capacity.

1 APUC's Utility Services business unit conducts business under the name of Liberty
2 Utilities Co. in the United States of America ("Liberty Utilities"). In December 2005, Rio
3 Rico Utilities, Inc. ("RRUI") became a wholly-owned subsidiary of Algonquin Water
4 Resources of America, Inc. ("AWRA"). AWRA later became known as Liberty Water,
5 Inc. ("Liberty Water"). Liberty Water was a wholly-owned subsidiary of Algonquin
6 Power Income Fund ("APIF"). In October of 2009, APIF became APUC.

7
8 As of December 31, 2012, Liberty Utilities' businesses operated under three separately
9 managed regions in the United States: Liberty Utilities (Central), Liberty Utilities (West),
10 and Liberty Utilities (South) (formerly known as Liberty Water).

11
12 Liberty Utilities (South) currently owns a portfolio of utilities in the United States of
13 America providing water or wastewater services in the states of Arizona, Texas, Missouri
14 and Illinois.

15
16 Liberty Utilities (South) Arizona Facilities include:

17 Litchfield Park Service Company

18 Gold Canyon Sewer Company

19 Black Mountain Sewer Corporation

20 Entrada Del Oro Sewer Company

21 Northern Sunrise Water Company, Inc.¹

22 Southern Sunrise Water Company, Inc.

23 Bella Vista Water Company

24 Rio Rico Utilities Inc.

25

¹ Decision No. 72251 ordered the consolidation of the operations of Northern Sunrise Water Company, Southern Sunrise Water Company and Bella Vista Water Company.

III. CONSUMER SERVICES

Q. Please provide a brief history of customer complaints received by the Commission regarding the Company. Additionally, please discuss customer responses to the Company's proposed rate increase.

A. A review of the Commission's Consumer Services database for the Company from January 1, 2010 to August 15, 2013, revealed the following for each Division:

Water Division

2013 - One Complaint (one quality of service), and zero opinions.

2012 - One Complaint (quality of service), and zero opinions.

2011 - Four Complaints (billing), and zero opinions.

2010 - One Complaint (billing), and zero opinions.

Wastewater Division

2013 - One Complaint (quality of service), and three opinions (all opposed to rate application).

2012 - Zero Complaints, and zero opinions.

2011 - Zero Complaints, and zero opinions.

2010 - One Complaint (quality of service), and zero opinions.

All complaints and inquiries have been resolved and closed.

IV. COMPLIANCE

Q. Please provide a summary of the compliance status of the Company.

A. A check of the ACC's Compliance database indicates that there are currently no delinquencies for the Company.

V. SUMMARY OF FILING, RECOMMENDATIONS, AND ADJUSTMENTS.

Q. Please summarize the Company's proposals in this filing, for its water and wastewater divisions.

A. The Company has proposed the following for its water and wastewater divisions.

Water Division

The Company-proposed rates, as filed, produce total operating revenue of \$13,458,550, an increase of \$2,257,160 or 20.15 percent, over adjusted test year revenue of \$11,201,390 to provide a \$3,387,127 operating income and a 9.50 percent rate of return on its proposed \$35,647,602 fair value rate base ("FVRB") which is its original cost rate base ("OCRB").

Wastewater Division

The Company-proposed rates, as filed, produce total operating revenue of \$11,020,691, an increase of \$659,088 or 6.36 percent, over adjusted test year revenue of \$10,361,603 to provide a \$2,268,786 operating income and a 9.50 percent rate of return on its proposed \$23,877,697 FVRB which is its OCRB.

Q. Please summarize Staff's recommendations.

A. Staff recommends the following for the Company's water and wastewater divisions.

Water Division

Staff recommends rates that produce total operating revenue of \$12,276,127, an increase of \$1,074,737 or 9.59 percent, over the adjusted test year revenue of \$11,201,390 to provide a \$652,686 operating income and an 8.10 percent return on the \$33,119,464 Staff-adjusted FVRB and OCRB.

Wastewater Division

Staff recommends rates that produce total operating revenue of \$10,303,654, a decrease of \$57,949 or 0.56 percent, under the adjusted test year revenue of \$10,361,603 to provide a \$1,897,396 operating income and a 8.10 percent return on the \$23,424,640 Staff-adjusted FVRB and OCRB.

Q. What test year did the Company use in this filing?

A. The Company's rate filing is based on the twelve months ended December 31, 2012 ("test year").

Q. Please summarize the rate base adjustments addressed in your testimony.

A. My testimony addresses the following issues:

Post-Test Year Plant – This adjustment applies to the wastewater division only, and decreases post-test year plant by \$700,000 to remove plant that is not completed nor used and useful.

Accumulated Depreciation – This adjustment applies to the water division only, and increases accumulated depreciation by \$2,454,081 to correct a cell formula error noted in the Company's application.

True-Up of Plant in Service Accruals – These adjustments apply to both the water and wastewater divisions, these adjustments are necessary to true-up plant that was accrued during the test year, decreases plant for the water division by \$196,725, and increases plant for the wastewater division by \$195,445.

Plant Additions Recorded in Wrong Years – These adjustments apply to both the water and wastewater divisions, these adjustments correct accumulated depreciation for plant that was recorded in the wrong years. These adjustments increase accumulated

1 depreciation for the water division by \$99,151 and increase accumulated depreciation for
2 the wastewater division by \$410.

3 Reclassification of Plant in Service – These adjustments apply to both the water and
4 wastewater divisions, these adjustments reclassify plant in the amount of \$2,843,470 for
5 the water division, and reclassify plant in the amount of \$642,735 for the wastewater
6 division, and transfer plant in the amount of \$6,000 from the water division to the
7 wastewater division. In addition these adjustments decrease accumulated depreciation for
8 the water division by \$27,948, and increase accumulated depreciation for the wastewater
9 division by \$18,194.

10 Plant Not Used and Useful – These adjustments apply to both the water and wastewater
11 divisions, and remove plant that was not used and useful during the test year, which results
12 in a decrease of plant in the amount of \$12,156 for the water division, and a decrease of
13 plant in the amount of \$124,546 for the wastewater division.

14 Duplicate Invoices – These adjustments apply to both the water and wastewater divisions,
15 and remove duplicate invoices, which results in a decrease of plant in the amount of
16 \$5,608 and accumulated depreciation in the amount of \$130 for the water division, and a
17 decrease of plant in the amount of \$4,672 and accumulated depreciation in the amount of
18 \$214 for the wastewater division.

19 Retirement of Transportation Equipment – This adjustment applies to the water division
20 only, and removes transportation equipment from the rate application that is retired, the
21 result of which is a decrease of plant in the amount of \$17,555 and associated accumulated
22 depreciation of \$17,555.

23 Contributions in Aid of Construction (“CIAC”) – These adjustments apply to both the
24 water and wastewater divisions, and correct cell formula errors in the Company’s CIAC
25 work sheets, which result in an increase of CIAC in the amount of \$101,234 for the water
26 division, and a decrease of CIAC in the amount of \$93,570 for the wastewater division. In

1 addition, the amortization of CIAC for the water division was decreased by \$193,524 and
2 for the wastewater division by \$293,474.

3 Customer Deposits – These adjustments apply to both the water and wastewater divisions,
4 and increase customer deposits based on Staff's use of a 13-month average, the result of
5 which is an increase to customer deposits in the amount of \$7,514 for the water division,
6 and an increase to customer deposits in the amount of \$8,334 for the wastewater division.

7 Accumulated Deferred Income Taxes ("ADIT") – These adjustments apply to both the
8 water and wastewater divisions and decrease ADIT for the water division by \$526,652 and
9 ADIT for the wastewater division by \$395,488 to adjust to Staff's recommended plant
10 adjustments.

11
12 **Q. Please summarize the operating revenue and expense adjustments addressed in your**
13 **testimony.**

14 **A.** My testimony addresses the following issues:

15 Water Testing Expense – These adjustments apply to both the water and wastewater
16 divisions and decrease water testing expense by \$4,464 for the water division, and
17 \$35,730 for the wastewater division. For the wastewater division only, Staff increased the
18 sludge removal expense by \$3,410 which is related to the water testing of the sludge.

19 Corporate Allocation Accrual True-Up – These adjustments apply to both the water and
20 wastewater divisions and decrease corporate expenses by \$8,420 for the water division,
21 and \$7,872 for the wastewater division to true-up the Company's accrual.

22 Corporate Allocation Expenses – These adjustments apply to both the water and
23 wastewater divisions and decrease corporate expenses by \$18,669 for the water division,
24 and \$23,978 for the wastewater division to remove items not necessary to the provision of
25 service.

1 Interest on Customer Deposits – These adjustments apply to both the water and
2 wastewater divisions and increase customer deposit interest expense by \$5,346 for the
3 water division, and \$5,931 for the wastewater division to include interest on customer
4 deposits as an operating expense.

5 Depreciation Expense – These adjustments apply to both the water and wastewater
6 divisions and increase depreciation expense for the water division by \$22,525 and
7 decrease depreciation expense for the wastewater division by \$13,337.

8 Property Tax Expense – These adjustments apply to both the water and wastewater
9 divisions and decrease property taxes for the water division by \$27,957 and by \$28,801
10 for the wastewater division to adjust property taxes to Staff's adjusted test year amount.

11 Income Tax Expense – These adjustments apply to both the water and wastewater
12 divisions and increases income taxes for the water division by \$25,440 and increases
13 income taxes by \$40,600 for the wastewater division to adjust income taxes to Staff's
14 adjusted test year amount.

15
16 **VI. RATE BASE**

17 **Fair Value Rate Base**

18 **Q. Did the Company prepare a schedule showing the elements of Reconstruction Cost**
19 **New Rate Base?**

20 A. No, the Company did not. The Company's filing treats the OCRB the same as the FVRB.

21
22 ***Rate Base Summary***

23 **Q. Please summarize Staff's adjustments to the Company's water and wastewater**
24 **division rate bases.**

25 A. Staff recommends the following for the Company's water and wastewater divisions.

26

1 ***Water Division***

2 A. Staff's adjustments to the Company's rate base resulted in a net decrease of \$2,528,138,
3 from \$35,647,602 to \$33,119,464. This decrease was primarily due to Staff's: (1)
4 adjustments to accumulated depreciation, (2) adjustments to true-up plant in service
5 accruals, (3) adjustments to correct plant in service recorded in the wrong years, (4)
6 removal of plant not used and useful, (5) removal of duplicate invoices, (6) adjustments to
7 reclassify plant in service to the correct accounts, (7) retirement of plant in service, (8)
8 adjustments to contributions in aid of construction, (9) adjustments to customer deposits,
9 and (10) adjustments to accumulated deferred income taxes, as shown on schedules DWC-
10 W3, and DWC-W4.

11
12 ***Wastewater Division***

13 A. Staff's adjustments to the Company's rate base resulted in a net decrease of \$453,057,
14 from \$23,877,697 to \$23,424,640. This decrease was primarily due to Staff's: (1) post-
15 test year plant (2) adjustments to accumulated depreciation, (3) adjustments to true-up
16 plant in service accruals, (4) adjustments to correct plant in service recorded in the wrong
17 years, (5) removal of plant not used and useful, (6) removal of duplicate invoices, (7)
18 adjustments to reclassify plant in service to the correct accounts, (8) adjustments to
19 contributions in aid of construction, (9) adjustments to customer deposits, and (10)
20 adjustments to accumulated deferred income taxes, as shown on schedules DWC-WW3,
21 and DWC-WW4.

22
23 ***Rate Base Adjustment No. 1 – Post-Test Year Plant (Wastewater Division Only)***

24 **Q. Did the Company include post-test year plant in its application?**

25 A. Yes. The Company has asked that its Palm Valley Water Reclamation Facility
26 ("PVWRF") Equalization Basin be included as post-test year plant. Part of the concrete

1 celling of the structure has eroded away, exposing several of the underlying structural
2 beams. The Company in its application stated that it anticipates the project to be
3 completed in the third or fourth quarter of 2013.
4

5 **Q. How did the Company account for the post-test year plant in its application?**

6 A. The Company estimated a cost of \$1,000,000 and associated retirement cost \$300,000,
7 thus a net addition of \$700,000 has been included in Plant Account No. 380 Treatment and
8 Disposal Equipment.
9

10 **Q. Has the PVWRF Equalization Basin project been completed?**

11 A. No, not at the date of this filing.
12

13 **Q. Is Staff amendable to including the post-test year plant at a later date in this docket**
14 **provided the Company can demonstrate that the project is complete and used and**
15 **useful?**

16 A. Yes. However, time is running out for the Company for inclusion of its post-test year
17 plant. Staff's surrebuttal testimony is tentatively due on November 12, 2013.
18

19 **Q. What is Staff's recommendation at the date of this filing?**

20 A. Staff recommends that Plant Account No. 380 Treatment and Disposal Equipment be
21 reduced by \$700,000 from \$5,585,470 to \$4,885,470, as shown on schedule DWC-WW5.
22

23 ***Rate Base Adjustment No. 2 – Accumulated Depreciation (Water Division Only)***

24 **Q. Did Staff make an adjustment to Accumulated Depreciation for the water division?**

25 A. Yes.
26

1 **Q. What adjustments did Staff make?**

2 A. First, Staff noted that accumulated depreciation is overstated on the Company's
3 application for the water division, Schedule B-2; page 4.3 the Company added account
4 301 Organization Cost in the amount of \$21,100 which is a non-depreciable account to
5 accumulated depreciation. Therefore, the \$21,100 must be removed from accumulated
6 depreciation.

7
8 Second, Staff noticed a cell formula error on the Company's application for the water
9 division, Schedule B-2; page 3.5 the accumulated depreciation column contained hard
10 coded numbers, which resulted in accumulated depreciation being understated. Staff
11 recalculated the accumulated depreciation using the correct cell formula. The result is an
12 increase to accumulated depreciation in the amount of \$2,475,801.

13
14 **Q. What is Staff's recommendation?**

15 A. Staff recommends increasing accumulated depreciation by \$2,454,801 from \$16,514,086
16 to \$18,968,887, as shown on schedule DWC-W6.

17
18 ***Rate Base Adjustment No. 3 – True-up of Plant-in-Service Accruals (Water and Wastewater***
19 ***Divisions)***

20 **Q. Did Staff make an adjustment to True-up Plant Accruals at the end of the test year?**

21 A. Yes. The Company uses accrual accounting, and therefore records an accrual for the
22 service when it is completed, but not yet billed. The Company then reverses the accrual in
23 the subsequent month and records the actual expense when the invoice is sent to the
24 Company. Based on a Staff data request the Company provided Staff with a transaction
25 detail listing of invoices obtained after the test year.

26

1 **Q. Based on transaction detail listing, were adjustments necessary?**

2 A. Yes. As summarized below:

NARUC Account No.	(Project Manager Estimate)	(Transaction Detail Tab)	(Actual - Accrual)
	Original Accrual	Actual Invoices	Difference
304	\$516,230	\$337,613	(\$178,617)
307	\$54,325	\$36,217	(\$18,108)
Total Water	\$570,555	\$373,830	(\$196,725)
354	\$1,117,556	\$1,316,556	\$199,000
396	\$56,425	\$52,870	(\$3,555)
371	\$45,548	\$45,548	\$0
Total Wastewater	\$1,219,529	\$1,414,974	\$195,445

10
11 **Q. What is Staff's recommendation?**

12 A. Staff recommends that Plant Account No. 304 Structures and Improvements be reduced by
13 \$178,617 from \$28,000,916 to \$27,822,299, and Plant Account No. 307 Wells and
14 Springs be reduced by \$18,108 from \$54,325 to \$36,217 for the water division; and for the
15 wastewater division Plant Account Number 354 Structures and Improvements be
16 increased by \$199,000 from \$24,208,314 to \$24,407,314, and Plant Account Number 396
17 Communications Equipment be decreased by \$3,555, as shown on schedules DWC-W7
18 and DWC-WW7.

19
20 ***Rate Base Adjustment No. 4 – Plant additions recorded in wrong year (Water and Wastewater***
21 ***Divisions)***

22 **Q. Did Staff make several adjustments to Accumulated Depreciation for Plant that was**
23 **recorded in the wrong year?**

24 A. Yes.

1 **Q. Why did Staff make this adjustment?**

2 A. While reviewing the Company's plant invoices, Staff noted several invoices that were
3 dated in 2006, 2007, and 2008 that were posted to the Company's general ledger as
4 additions in 2009, 2010, 2011, and 2012.

5
6 **Q. What was the cause of the error?**

7 A. Based on the Company's response to Staff data request 15.1, the Company stated that it
8 "inadvertently omitted these invoices from its B-2 Schedules in the last rate case. The
9 Company discovered a batch of invoices were not capitalized to utility plant in-service in
10 the last rate case and therefore needed to be included in this rate case. As a consequence,
11 the Company has not yet recovered a return on or of these investments."

12
13 **Q. What is the effect of this error?**

14 A. Since the plant was placed into service prior to being recorded in the general ledger, the
15 effect of this error is that the accumulated depreciation balance has been understated.

16
17 **Q. Based on a Staff data request, did the Company provide Staff with a spreadsheet
18 that recalculated the correct accumulated depreciation balances for those plant items
19 that were posted in the future?**

20 A. Yes.

21
22 **Q. What is Staff's recommendation?**

23 A. Staff recommends increasing the accumulated depreciation balances by \$99,151 for the
24 water division and \$401 for the wastewater division to correct this error, as shown on
25 schedules DWC-W8 and DWC-WW8.

26

1 **Q. Does Staff have any additional recommendations?**

2 A. Yes. Staff recommends that in the future the Company correctly record plant additions in
3 the correct month and year.
4

5 ***Rate Base Adjustment No. 5 – Reclassification of Plant in Service (Water and Wastewater***
6 ***Divisions)***

7 **Q. Based on Staff's engineering analysis has Staff reclassified some of the Company's**
8 **plant?**

9 A. Yes. See the attached Staff Engineering Report.
10

11 **Q. Why did Staff make this adjustment?**

12 A. The Company incorrectly included plant costs in the wrong plant accounts. Dorothy
13 Hains, Staff's Engineer, inspected the entire system for both the water and wastewater
14 divisions and identified plant-in-service items that needed to be reclassified.
15

16 **Q. What is Staff's recommendation?**

17 A. For the water division, Staff recommends reclassifying \$2,843,470 into the proper plant
18 accounts and the transfer of \$6,000 from the water to wastewater division, along with the
19 associated accumulated depreciation, as shown on schedule DWC-W9.
20

21 For the wastewater division, Staff recommends reclassifying \$642,738 into the proper
22 plant accounts and the transfer of \$6,000 from the water division, along with the
23 associated accumulated depreciation, as shown on schedule DWC-WW9.
24

Rate Base Adjustment No. 6 – Plant Not Used and Useful (Water and Wastewater Divisions)

Q. Did Staff make an adjustment to plant or plant items that were not used and useful?

A. Yes.

Q. What adjustment did Staff make?

A. Staff identified \$12,156 in plant that was not used and useful for the water division, and \$124,546 in plant that was not used and useful for the wastewater division, along with the associated accumulated depreciation.

Q. Why did Staff make this adjustment?

A. Dorothy Hains, Staff's Engineer, inspected the entire system for both the water and wastewater divisions and identified certain individual plant items that were not serving customers during the test year.

Q. What is Staff's recommendation?

A. Staff recommends decreasing plant in service by \$12,156, for the water division; and decreasing plant in service by \$124,546 for the wastewater division, along with the associated accumulated depreciation to remove all plant from rate base that was not used and useful, as shown on schedules DWC-W10 and DWC-WW10.

Rate Base Adjustment No. 7 – Removal of Duplicate Invoices (Water and Wastewater Divisions)

Q. During the course of the audit did the Company agree to remove some duplicate invoices?

A. Yes.

1 **Q. Has Staff made adjustments to its schedules to remove the duplicate invoices and**
2 **associated accumulated depreciation?**

3 A. Yes.
4

5 **Q. What is Staff's recommendation?**

6 A. Staff recommends removal of these items, in the amount of \$5,608 for the water division,
7 and in the amount of \$4,672 for the wastewater division, along with the associated
8 accumulated depreciation, as shown on schedules DWC-W11 and DWC-WW11.
9

10 ***Rate Base Adjustment No. 8 – Transportation Equipment not retired (Water Division Only)***

11 **Q. Has the Company proposed to retire Transportation Equipment that was not deleted**
12 **from the Company books?**

13 A. Yes. According to the Company in 2011, the Company traded in an old truck for the
14 purchase of a new truck, but did not record the retirement.
15

16 **Q. What is Staff's recommendation?**

17 A. Staff recommends the removal of \$17,555 from Plant Account 341 Transportation
18 Equipment, along with the associated accumulated depreciation. As shown on schedule
19 DWC-W12.
20

21 ***Rate Base Adjustment No. 9 – Contributions in Aid of Construction ("CIAC") (Water and***
22 ***Wastewater Divisions)***

23 **Q. During the course of the Audit did Staff identify some cell formula errors in the**
24 **Company's CIAC Excel worksheets?**

25 A. Yes.
26

1 **Q. Are Staff and the Company in agreement with the corrections made to the CIAC**
2 **Excel worksheets?**

3 A. Yes.

4
5 **Q. What is Staff's recommendation?**

6 A. Staff recommends increasing CIAC for the water division by \$101,234 from \$7,324,578 to
7 \$7,425,812, and decreasing CIAC for the wastewater division by \$93,570 from
8 \$28,470,485 to \$28,376,915.

9
10 Staff also recommends decreasing the CIAC amortization for the water division by
11 \$193,524 from \$1,489,772 to \$1,296,248, and decreasing the CIAC amortization for the
12 wastewater division by \$293,474 from \$4,446,775 to \$4,153,301, as shown in schedules
13 DWC-W13 and DWC-WW13.

14
15 ***Rate Base Adjustment No. 10 – Customer Deposits (Water and Wastewater Division)***

16 **Q. Did Staff make an adjustment to customer deposits?**

17 A. Yes.

18
19 **Q. What adjustment did Staff make?**

20 A. Staff is increasing Customer Deposits by \$15,849, of which \$7,514 will be allocated to the
21 water division and \$8,334 will be allocated to the wastewater division.

22
23 **Q. Why did Staff make this adjustment?**

24 A. Staff utilized a 13-month average to calculate an average customer deposit amount. Staff
25 believes a 13-month average is preferable to using a year-end amount as the year-end

1 amount may differ significantly from the average amount, and thus provides a more
2 realistic relationship between revenues, expenses and rate base.

3
4 **Q. Has Staff also made an adjustment to recognize the interest paid on the customer**
5 **deposits?**

6 A. Yes, see operating income adjustment number 5.

7
8 **Q. What is Staff's recommendation?**

9 A. Staff recommends increasing Customer Deposits by \$166,998 from \$68,685 to \$235,683
10 as shown on schedules DWC-W14 and DWC-WW14.

11
12 ***Rate Base Adjustment No. 11 – Accumulated Deferred Income Taxes (“ADIT”) (Water and***
13 ***Wastewater Division)***

14 **Q. Based on the adjustments to plant has Staff made an adjustment to the ADIT**
15 **calculation?**

16 A. Yes. Staff has adjusted the ADIT calculation to account for the changes in the plant, post-
17 test year plant and changes in the Arizona state income tax. The Arizona state income tax
18 change will be discussed below.

19
20 **Q. What is Staff's recommendation?**

21 A. Staff recommends decreasing ADIT for the water division by \$565,674 and decreasing
22 ADIT for the wastewater division by \$601,479 to reflect Staff's recommended plant
23 adjustments, as shown on schedules DWC-W15 and DWC-WW15.

VII. OPERATING INCOME

Operating Income Summary

Q. What are the results of Staff's analysis of test year revenues, expenses, and operating income for the water and wastewater divisions?

A. The results for the Company's water and wastewater divisions are presented below:

Water Division

Staff's analysis resulted in adjusted test year operating revenues of \$11,201,390 operating expenses of \$9,171,401 and operating income of \$2,029,989, as shown on schedules DWC-W16 and DWC-W17. Staff made seven adjustments to operating expenses.

Wastewater Division

Staff's analysis resulted in adjusted test year operating revenues of \$10,361,603, operating expenses of \$8,429,079 and operating income of \$1,932,524 as shown on schedules DWC-WW16 and DWC-WW17. Staff made seven adjustments to operating expenses.

Operating Income Adjustment No. 1 – Water Testing Expense (Water and Wastewater Divisions)

Q. What did the Company propose for water testing expense?

A. The Company proposed water testing expenses for the water division of \$66,942, and for the wastewater division of \$57,735.

Q. What adjustment did Staff make?

A. Staff adjusted water testing expense downward by \$4,464, from \$66,942 to \$62,478 for the water division, and adjusted water testing expense downward by \$35,730, from \$57,735 to \$22,005 for the wastewater division, to reflect Staff's recommended amount.

1 In addition, Staff also increased sludge removal expense by \$3,410 (to account for sludge
2 testing that must be performed before the waste can be removed), from \$234,893 to
3 \$238,303. Please see the attached Engineering Report.

4
5 **Q. What is Staff's recommendation?**

6 A. Staff recommends decreasing water testing expense by \$4,464 for the water division,
7 decreasing water testing expense by \$35,730 for the wastewater division, and increasing
8 sludge removal expense by \$3,410 for the wastewater division, as shown on schedules
9 DWC-W18 and DWC-WW18.

10
11 ***Operating Income Adjustment No. 2 – Corporate Allocation Accrual True-Up (Water and***
12 ***Wastewater Divisions)***

13 **Q. Did Staff make an adjustment to true-up corporate allocation accruals?**

14 A. Yes. The Company allocated a percentage of the following corporate cost pools from its
15 parent company APUC during the test year. The cost pools are as shown below:
16

1	Audit	\$1,561,911
2	Tax	\$1,169,300
3	Legal	\$635,190
4	Professional Services	\$680,395
5	Unitholder Communications	\$700,793
6	Trustee / Director Fees	\$378,154
7	Computer Supplies /Repairs	\$51,761
8	Office Expenses	\$98,210
9	Employee Stock Purchase Plan	\$4,270
10	Board of Director's Insurance	\$145,728
11	Escrow & Transfer Agent Fees	\$75,000
12	Training	\$76,343
13	Stock Option expense	\$1,376,013
14	Recruiting	\$54,095
15	Meals and Entertainment	\$2,315
16	Rent	\$84,861
17	Communication	\$78,982
18	Dues and Memberships	\$47,155
19	Licenses/Fees & Permits	\$384,904
20	Net Other Admin Costs	<u>\$14,274</u>
21	Total	\$7,619,653

As stated earlier the Company uses accrual accounting, and therefore records an accrual for the estimated service when it is completed, but not yet billed. The Company then reverses the accrual in the subsequent month and records the actual expense when the invoice is sent to the Company. Based on a Staff data request the Company provided Staff with a transaction detail listing of invoices obtained after the test year.

Q. Based on transaction detail listing, were adjustments necessary?

A. Yes. As summarized below:

	[1]	[2]	[3]	[4]	[5]
				Invoices	
Description	Total	Actual	Accrual	Received	Accrual
Audit	\$1,561,911	\$1,193,820	\$368,090	\$778,942	\$410,852
Tax	\$1,169,300	\$258,075	\$911,225	\$443,044	(\$468,181)
Legal	\$635,190	\$544,314	\$90,877	\$100,292	\$9,415
Unitholder					
Communications	\$700,793	\$479,663	\$221,130	\$212,116	(\$9,014)
Trustee / Director Fees	\$378,154	\$374,615	\$3,540	\$22,875	\$19,335
Computer Supplies					
/Repairs	\$51,761	\$51,761	\$0	\$0	\$0
Office Expenses	\$98,210	\$98,210	\$0	\$0	\$0
Licenses/Fees & Permits	\$384,904	\$98,627	\$286,276	\$294,571	\$8,295
Total	\$4,980,223	\$3,099,085	\$1,881,139	\$1,851,841	(\$29,297)

Q. What is Staff's recommendation?

A. Staff recommends reducing corporate expenses by \$29,297, of which \$8,420 will be allocated to the water division and \$7,872 will be allocated to the wastewater division, as shown on schedules DWC-W19, and DWC-WW19.

Operating Income Adjustment No. 3 – APUC Corporate Allocations (Water and Wastewater Divisions)

Q. In response to a Staff data request did the Company propose eliminating meals and entertainment expenses related to the corporate cost pool allocations, and other items such as donations?

A. Yes.

Q. Does Staff agree with the Company's adjustments to the APUC Corporate Allocations?

A. Yes.

1 **Q. What is Staff's recommendation?**

2 A. Staff recommends reducing APUC corporate expenses by \$18,669 for the water division,
3 and by \$23,978 for the wastewater division, as shown in schedules DWC-W20 and DWC-
4 WW20.

5
6 *Operating Income Adjustment No. 4 – Customer deposit interest expense (Water and*
7 *Wastewater Divisions)*

8 **Q. In response to a Staff data request did the Company include customer interest as an**
9 **operating expense?**

10 A. No. The Company included customer deposit interest as a below the line expense item.

11
12 **Q. What is Staff's recommendation?**

13 A. Staff recommends including customer interest expense as an operating expense, and
14 increasing operating expenses by \$5,346 for the water division, and by \$5,931 for the
15 wastewater division, as shown on schedules DWC-W21 and DWC-WW21.

16
17 *Operating Income Adjustment No. 5 – Depreciation Expense (Water and Wastewater*
18 *Divisions)*

19 **Q. Did Staff make an adjustment to depreciation expense?**

20 A. Yes.

21
22 **Q. What adjustment did Staff make?**

23 A. As a result of adjustments made to plant in service, Staff also adjusted the associated
24 depreciation expense.

25

1 **Q. What is Staff's recommendation?**

2 A. For the Water Division, Staff recommends increasing depreciation expense by \$13,318
3 from \$2,615,868 to \$2,629,186 , as shown in Schedule DWC-W22. For the Wastewater
4 Division, Staff recommends decreasing depreciation expense by \$9,384 from \$1,598,765
5 to \$1,589,381 as shown on Schedule DWC-WW22.

6
7 ***Operating Income Adjustment No. 6 – Property Tax Expense (Water and Wastewater***
8 ***Divisions)***

9 **Q. What method has the Commission typically adopted to determine property tax**
10 **expense for ratemaking purposes for Class C and above water utilities?**

11 A. The Commission's practice in recent years has been to use a modified Arizona
12 Department of Revenue ("ADOR") methodology for water and wastewater utilities.

13
14 **Q. Did Staff calculate property taxes using the modified ADOR method?**

15 A. Yes. As shown on Schedule DWC-W23, and DWC-WW23, Staff calculated property tax
16 expense using the modified ADOR method for both test year and Staff-recommended
17 revenues. Since the modified ADOR method is revenue dependent, the property tax is
18 different for test year and recommended revenues. Staff has included a factor for property
19 taxes in the gross revenue conversion factor that automatically adjusts the revenue
20 requirement for changes in revenue in the same way that income taxes are adjusted for
21 changes in operating income.

22
23 **Q. Has Staff also made an adjustment to the property tax assessment ratio?**

24 A. Yes. Based on House Bill 2001, Staff has adjusted the property tax assessment ratio to
25 19.0 percent.

26

1 **Q. What does Staff recommend for test year property tax expense?**

2 A. For the water division, Staff recommends decreasing test year property tax expense by
3 \$30,754, from \$559,128 to \$528,374, as shown in schedule DWC-W23, and for the
4 wastewater division, Staff recommends decreasing test year property tax expense by
5 \$28,801 from \$576,026 to \$547,225 as shown on schedule DWC-WW23.

6
7 ***Operating Income Adjustment No. 7 – Income Tax Expense (Water and Wastewater Divisions)***

8 **Q. Did Staff make an adjustment to income tax expense?**

9 A. Yes, based on Staff's recommended revenue requirement.

10
11 **Q. How did Staff calculate income tax expense for the Company?**

12 A. Staff applied the statutory state and federal income tax rates to Staff's taxable income.
13 Income tax expenses for the test year and recommended revenues are shown on schedules
14 DWC-W2, and DWC-WW2.

15
16 **Q. Did Staff change the State income tax rate from 6.968 percent to 6.5 percent?**

17 A. Yes, as will be discussed in the other matters section under the heading income taxes.

18
19 **Q. What adjustment does Staff recommend for test year income tax expense for the**
20 **Company?**

21 A. For the water division, Staff recommends increasing test year income tax expense by
22 \$30,754 , from \$1,028,634 to \$1,024,470 , as shown on schedule DWC-W24, and for the
23 wastewater division, Staff recommends increasing test year income tax expense by
24 \$28,801 from \$1,013,153 to \$1,042,000 as shown on schedule DWC-WW24.

25

VIII. OTHER ISSUES

Deferred Regulatory Asset (Water Division Only)

Q. Can you provide some background on the Company's Deferred Regulatory Asset?

A. Yes. On December 28, 2006, the Company filed a request asking for an accounting order that would authorize deferral of LPSCO's costs incurred in connection with the Company's response to the potential groundwater Trichloroethylene ("TCE") contamination including but not limited to 1) litigation costs related to defending the Company against lawsuits; 2) litigation costs related to seeking restitution from polluters/contaminators; 3) increases in operation and maintenance costs from alternative (replacement) water sources; 4) capital costs of acquiring and/or constructing alternative (replacement) sources of water; 5) capital costs and/or operating expenses to treat contaminated water supplies; 6) settlement costs and/or amounts received as a result of settlements with polluters/contaminators; and 7) punitive damages received as the result of litigation against polluters/contaminators.

In Decision No. 69912, dated September 27, 2007, the Commission approved LPSCO's request for an accounting order authorizing the deferral of costs associated with efforts to address the potential contamination of its water supply.

Q. Was the issue of the Company's TCE deferral addressed in the Company's last rate case?

A. Yes. In Decision No. 72026, dated December 10, 2010, the Commission found that:
*"It is appropriate to allow LPSCO to include the deferred regulatory assets in rate base herein and to amortize those assets over 10 years."*²

² Please see page 25 of Commission Decision No. 72026.

1 **Q. What was the amount authorized in Decision No. 72026?**

2 A. The amount authorized in Decision No. 72026 was \$82,561, and this amount was to be
3 amortized over ten years.

4

5 **Q. Did the Company amortize any of the \$82,561 approved in the last Decision?**

6 A. Yes. The Company has amortized \$17,888. The Company has calculated a net deferred
7 regulatory asset of \$64,673 (i.e. \$82,561 - \$17,888).

8

9 **Q. What amount is the Company claiming as a deferred asset in the current rate case?**

10 A. The Company is claiming \$90,381 as a deferred regulatory asset related to the TCE
11 plume.

12

13 **Q. In addition to the net deferred regulatory asset of \$64,673 did the Company also**
14 **include \$25,708 in ongoing TCE plume expenses?**

15 A. Yes. The Company is claiming \$90,381 (i.e. \$64,673 + \$25,708) as a deferred regulatory
16 asset. However, in a separate compliance filing, filed on December 21, 2012, the
17 Company claimed it has spent to date approximately \$99,565. This results in a difference
18 of \$8,704 (i.e. \$108,269 (82,561+25,708) - \$99,565). Based on informal conversations
19 with the Company, the Company has acknowledged that the compliance report is
20 incorrect.

21

22 **Q. Is Staff opposed to recognizing an additional \$25,708 in this case?**

23 A. No.

1 **Q. What is Staff's recommendation?**

2 A. Staff recommends increasing the Company's deferred regulatory asset by \$25,708. Staff
3 recommends that the Company correct its compliance filing report. Further Staff also
4 recommends amortizing the additional \$25,708 in deferred regulatory assets over 10 years.
5

6 ***Declining Usage Adjustment (Water Division Only)***

7 **Q. Has the Company asked for a declining usage adjustment?**

8 A. Yes. The Company has asked for an approximate 1/2 percentage decrease or a \$58,000
9 decrease in test year revenues, based on the declining usage-driven revenue erosion of its
10 3/4 inch and 1 inch residential customers.
11

12 **Q. Does the declining usage adjustment cover other customer classes like commercial,
13 industrial, and large size residential customers?**

14 A. No.
15

16 **Q. What happens if these customers increase their usage?**

17 A. The Company increases its revenue at the expense of its ratepayers.
18

19 **Q. Has Staff previously recommended a Declining Usage Adjustment?**

20 A. Yes, as part of a settlement agreement in the Arizona Water - Northern Group Case,
21 Docket No. W-01445A-12-0348.
22

23 **Q. Has the Commission expressed concerns about a declining usage adjustor?**

24 A. Yes and the Commission expressed these concerns in the Arizona Water Northern Group
25 case, in which Commissioner Brenda Burns on September 10, 2013, proposed the
26 following amendment which passed.

Page 65, Line 7 - INSERT New Paragraph:

“Based on our language in AWC’s Eastern Group rate case decision (Decision No. 73736), RUCO’s exceptions to this adjustment, and the fact that we have never before approved a declining water usage adjustment and there is a possibility (regardless of how small a possibility) that water use will not actually decline, we will also require AWC to provide the above data every January, until further order of the Commission, beginning January 2015. The data provided shall cover the previous twelve (12) months. Staff shall analyze the data and, if necessary, provide a recommendation to the Commission to modify or eliminate the water usage adjustment by recommending that this Decision be reopened for further Commission consideration. Any other party to this case may also make a recommendation to the Commission based on that party’s analysis of the data.”

Page 71, Line 13 - INSERT New Finding of Fact:

“In addition, we will require AWC to provide the above data every January, until further order of the Commission, beginning January 2015. The data provided shall cover the previous twelve (12) months. Staff shall analyze the data and, if necessary, provide a recommendation to the Commission to modify or eliminate the water usage adjustment. If the Commission desires to consider such an adjustment or elimination, the Commission shall do so by reopening this Decision and provide notice and an opportunity to be heard. Any other party to this case may also make a recommendation to the Commission based on that party’s analysis of the data.”

Page 73, Line 15 - INSERT New ordering Paragraph:

“IT IS FURTHER ORDERED that Arizona Water Company shall provide the above water usage data every January, until further order of the Commission, beginning January 2015. The data provided shall cover the previous twelve (12) months. Staff shall analyze

1 the data and, if necessary, provide a recommendation to the Commission to modify or
2 eliminate the water usage adjustment as discussed in Finding of Fact No. XX.”

3
4 **Q. What is Staff’s recommendation?**

5 A. Staff recommends approval of a declining usage adjustment subject to the same conditions
6 that are included in the Arizona Water Company – Northern Group filing.

7
8 **Q. How will the process work?**

9 A. The Company shall file an annual report that details not only the 3/4 inch and 1 inch
10 customer usage, but all customer usage. Staff will review the annual filings and, if
11 necessary, provide a report and recommendation of the Commission.

12
13 ***Income Taxes***

14 **Q. Did Staff reduce the state corporate income tax rate from 6.968 percent to 6.5**
15 **percent to comport with House Bill (“HB”) 2001 that was signed into law by**
16 **Governor Jan Brewer on February 17, 2011?**

17 A. Yes. Staff has reduced the State corporate income tax rate in its gross revenue conversion
18 factor for both the Company’s Water and Wastewater Divisions.

19
20 **Q. Please elaborate on the provision contained in HB 2001.**

21 A. H.B. 2001 maintains the current State corporate income tax rate of 6.968% through
22 December 31, 2013. Thereafter, H.B. 2001 reduces the rate as follows:

- 23 • 6.5% for taxable years beginning from and after December 31, 2013 through
24 December 31, 2014
- 25 • 6.0% for taxable years beginning from and after December 31, 2014 through
26 December 31, 2015

- 1 • 5.5% for taxable years beginning from and after December 31, 2015 through
2 December 31, 2016
- 3 • 4.9% for taxable years beginning from and after December 31, 2016

4

5 **Q. Do the provisions of this new HB give rise to excess deferred income taxes?**

6 A. Yes.

7

8 **Q. Please explain deferred income taxes?**

9 A. The level of income that is taxable from state and federal tax agencies is often different for
10 accounting “book” income and for income tax reporting purposes due to expense
11 recognition timing differences. A prime example is the level of depreciation expense
12 recognized for accounting purposes will be less in early years than the level of
13 depreciation expense recognized for tax purposes – due to the accelerated depreciation
14 methods used for income tax reporting purposes. Such timing difference originates in one
15 period and reverses or turns around in one or more subsequent periods. When effective
16 tax rates change over time, especially with the tax rate is scheduled to decrease over a
17 period of time, ratepayers can overfund the level of income taxes. In this case since the
18 State taxable rate has been 6.0 percent but the actual tax rate will decrease to 4.9 percent
19 of a period of years. Because taxes have been collected from ratepayers, and deferred on
20 the Company’s books at 6.0percent, but will eventually be paid to the state at only say 4.9
21 percent, a surplus exists in this account. This excess should be quantified and a plan
22 presented for eventually crediting any over-collections back to ratepayers.

1 **Q. Has the Commission dealt with the refunding of excess deferred income taxes**
2 **before?**

3 A. Yes. In the late 1980s when the Federal Income Tax rate was reduced from 46 percent to
4 34 percent by the Tax Reform Act of 1986. In Decision No. 56035, Docket No.
5 E-1051-88-034, the Utility was ordered by the Commission to first come-up with a plan
6 and second to refund any excess monies to rate payers.

7

8 **Q. As a result of this decision did other utility companies file a plan and refund monies**
9 **to ratepayers?**

10 A. Yes.

11

12 **Q. What is Staff's recommendation with regards to the HB 2001-driven reduction to**
13 **the State income tax rate?**

14 A. Staff recommends that the Company:

- 15 1. Determine the amount of excess deferred income tax related to the change in State
16 income tax.
17 2. Present a plan, within 60 days of a Commission decision in this matter, on how to
18 refund any excess State income tax recoveries to rate payers.

19

20 ***Hook-up Fees***

21 **Q. Does the Company currently have hook-up fees?**

22 A. Yes.

1 **Q. Is the Company proposing a change to its existing hook-up fees for its water division**
2 **in this case?**

3 A. Yes. The Company is proposing to add an 8-inch, 10-inch, and 12-inch and larger meters
4 size to its hook-up fee tariff, with an increasing cost for each progressively larger meter
5 size.

6
7 **Q. Does Staff agree with the Company's proposed changes to its water hook-up fee**
8 **tariff?**

9 A. Yes. Staff recommends approval of the Company's water off-site facilities hookup fee
10 tariff, subject to certain conditions (see testimony of Staff Engineer Dorothy Hains).

11
12 ***Property Tax Accounting Deferrals***

13 **Q. Are you aware of any water or wastewater companies that have Commission**
14 **authorized property tax accounting deferral plans?**

15 A. I am not aware of any such deferral being authorized for water or wastewater companies.

16
17 **Q. To the best of your knowledge, does the Arizona Public Service Corporation ("APS")**
18 **have such a Commission authorized accounting deferral plan?**

19 A. Yes. APS has been cited by various water and wastewater companies seeking a similar
20 property tax deferral, and LPSCO has also cited APS, although no Decision, Docket
21 Number, or citation was given in Mr. Krygier's testimony.

22
23 **Q. Staff already adjusts property tax recoveries to reflect its recommended revenue**
24 **requirement, correct?**

25 A. Yes, just as the Company's consultant adjusted property taxes when he filed this rate case.
26

1 **Q. Has there been a problem in the past with the way Staff traditionally computed the**
2 **higher property taxes that result from higher authorized revenues?**

3 A. No, not that I am aware of. This methodology has been used by Staff for over ten years.
4 This methodology usually provides an added benefit to water and wastewater companies
5 because it has a forward looking component which is based on Staff's recommended
6 revenue. Simply put, it usually increases test year property tax expenses.

7
8 **Q. Do you take issue with the \$740,000 property tax increase cited in Mr. Krygier's**
9 **testimony?**

10 A. Yes. This property tax increase appears to be unrealistic when looking at the level of such
11 tax in the Company's annual reports. The Company's annual reports reflect property tax
12 paid in 2008 for its water division was \$104,798, and in 2012 the amount was \$158,006,
13 an increase of \$53,208. For its wastewater division, the Company reported property tax
14 paid in 2008 for its wastewater division of \$423,415, and in 2012 the amount was
15 \$627,380, an increase of \$203,965 or a total increase of \$257,173.

16
17 **Q. What is Staff's recommendation?**

18 A. Staff recommends denial of the Company's proposed property tax accounting deferral
19 request.

20
21 **IX. ADJUSTOR MECHANISMS**

22 **Q. What types of adjustor mechanisms has the Company asked for in this case?**

23 A. The Company has requested Commission approval of the following:

- 24 1. A Distribution System Improvement Charge ("DSIC")
25 2. A Collection System Improvement Charge ("CSIC")
26 3. A Purchased Power Adjustor Mechanism ("PPAM"), and

1 4. A Property Tax Accounting Deferral

2
3 ***Distribution System Improvement Charge ("DSIC")***

4 **Q. Explain the general concept of a DSIC as proposed by the Company?**

5 A. A DSIC is a surcharge mechanism that enables the Company to implement and/or change
6 a surcharge to recover the revenue requirement (depreciation and rate of return) on capital
7 invested in certain items of plant between rate cases.

8
9 ***Purchased Power Adjustor Mechanism ("PPAM")***

10 **Q. Has the Company asked for a PPAM?**

11 A. Yes.

12
13 **Q. What is a PPAM?**

14 A. It is an adjustor mechanism that allows a utility to track fluctuations in its cost of power.
15 In a rate case, the cost of power is determined and that cost is included in regular base
16 rates. Then fluctuations from that cost are tracked and recorded and the adjustor
17 mechanism allows the utility to bill its customers for costs of power above that set in the
18 rate case or credit its customers for costs below that set in the rate case.

19
20 **Q. How has the Company's purchased power expense varied over the last five years?**

21 A. The following information demonstrates the fluctuating nature in its purchased power
22 expense for both the water and wastewater divisions.

23
24
25

1 Water Division – Purchased Power³

2 2012 \$891,103

3 2011 \$898,826

4 2010 \$937,193

5 2009 \$1,036,813

6 2008 \$883,165

7
8 Wastewater Division – Purchased Power

9 2012 \$605,563

10 2011 \$616,260

11 2010 \$629,703

12 2009 \$649,649

13 2008 \$677,056

14
15 **Q. What is Staff's recommendation?**

16 A. Staff recommends approval of the Company's proposed PPAM subject to certain
17 conditions.

18
19 **Q. What are those conditions?**

20 A. These conditions are continually evolving, but for now Staff recommends the following:

- 21 1. That the Company provided an annual report on purchased power.
- 22 2. That Staff calculate an annual increase or decrease, and provide a Recommended
- 23 Opinion and Order for Commission approval within 30 days of the Company's annual
- 24 report.

25

³ As reported on the Company's Annual Report.

1 **Q. Does this conclude your direct testimony?**

2 **A. Yes, it does.**

Litchfield Park Service Company - Water Division
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Test Year Ended: December 31, 2012

Direct Testimony of Darron W. Carlson

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DWC-W23	OPERATING INCOME ADJUSTMENT # 6 - PROPERTY TAX EXPENSE
DWC-W24	OPERATING INCOME ADJUSTMENT # 7 - TEST YEAR INCOME TAXES

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY FAIR VALUE	(B) STAFF FAIR VALUE
1	Adjusted Rate Base	\$ 35,647,602	\$ 33,119,464
2	Adjusted Operating Income (Loss)	\$ 2,024,376	\$ 2,029,990
3	Current Rate of Return (L2 / L1)	5.68%	6.13%
4	Required Rate of Return	9.50%	8.10%
5	Required Operating Income (L4 * L1)	\$ 3,387,127	\$ 2,682,677
6	Operating Income Deficiency (L5 - L2)	\$ 1,362,751	\$ 652,686
7	Gross Revenue Conversion Factor	1.6563	1.6466
8	Required Revenue Increase (L7 * L6)	\$ 2,257,160	\$ 1,074,737
9	Adjusted Test Year Revenue	\$ 11,201,390	\$ 11,201,390
10	Proposed Annual Revenue (L8 + L9)	\$ 13,458,550	\$ 12,276,127
11	Required Increase in Revenue (%)	20.15%	9.59%

References:

Column (A): Company Schedule A-1

Column (B): Staff Schedules DWC-W3 and DWC-W16

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	39.2701%			
5	Subtotal (L3 - L4)	60.7299%			
6	Revenue Conversion Factor (L1 / L5)	1.646636			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 23)	38.2900%			
9	One Minus Combined Income Tax Rate (L7 - L8)	61.7100%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)	0.0000%			
<u>Calculation of Effective Tax Rate:</u>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.5000%			
14	Federal Taxable Income (L12 - L13)	93.5000%			
15	Applicable Federal Income Tax Rate (Line 55)	34.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	31.7900%			
17	Combined Federal and State Income Tax Rate (L13 + L16)		38.2900%		
<u>Calculation of Effective Property Tax Factor:</u>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (L17)	38.2900%			
20	One Minus Combined Income Tax Rate (L18-L19)	61.7100%			
21	Property Tax Factor	1.5883%			
22	Effective Property Tax Factor (L20*L21)		0.9801%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			39.2701%	
24	Required Operating Income	\$ 2,682,677			
25	Adjusted Test Year Operating Income (Loss)	2,029,990			
26	Required Increase in Operating Income (L24 - L25)		\$ 652,686		
27	Income Taxes on Recommended Revenue (Col. [E], L52)	\$ 1,459,054			
28	Income Taxes on Test Year Revenue (Col. [B], L52)	1,054,074			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		404,981		
30	Recommended Revenue Requirement	\$ 12,276,127			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)				
35	Property Tax with Recommended Revenue	\$ 548,241			
36	Property Tax on Test Year Revenue	531,171			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		17,070		
38	Total Required Increase in Revenue (L26 + L29 + L34 + L37)		\$ 1,074,737		
<u>Calculation of Income Tax:</u>					
39	Revenue	\$ 11,201,390	\$ 1,074,737	\$ 12,276,127	
40	Operating Expenses Excluding Income Taxes	\$ 8,117,326		\$ 8,134,396	
41	Synchronized Interest (L56)	\$ 331,195		\$ 331,195	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 2,752,869		\$ 3,810,536	
43	Arizona State Income Tax Rate	6.5000%		6.5000%	
44	Arizona Income Tax (L42 x L43)	\$ 178,936		\$ 247,685	
45	Federal Taxable Income (L42 - L44)	\$ 2,573,933		\$ 3,562,851	
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 7,500		\$ 7,500	
47	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ 6,250		\$ 6,250	
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ 8,500		\$ 8,500	
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ 91,650		\$ 91,650	
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ 761,237		\$ 1,097,469	
51	Total Federal Income Tax	\$ 875,137		\$ 1,211,369	
52	Combined Federal and State Income Tax (L44 + L51)	\$ 1,054,074		\$ 1,459,054	
53	Applicable Federal Income Tax Rate [Col. [E], L51 - Col. [B], L51] / [Col. [E], L45 - Col. [B], L45]			34.0000%	
<u>Calculation of Interest Synchronization:</u>					
54	Rate Base	\$ 33,119,464			
55	Weighted Average Cost of Debt	1.0000%			
56	Synchronized Interest (L45 X L46)	\$ 331,195			

Litchfield Park Service Company - Water Division
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Schedule DWC-W3

RATE BASE - ORIGINAL COST

LINE NO.		(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	(C) STAFF AS ADJUSTED
1	Plant in Service	\$ 91,151,411	\$ (244,200)	\$ 90,907,211
2	Less: Accumulated Depreciation	16,514,086	2,508,318	19,022,404
3	Net Plant in Service	<u>\$ 74,637,325</u>	<u>\$ (2,752,518)</u>	<u>\$ 71,884,807</u>
4				
5	<u>LESS:</u>			
6				
7	Contributions in Aid of Construction (CIAC)	\$ 7,324,578	\$ 101,234	\$ 7,425,812
8	Less: Accumulated Amortization	1,489,772	(193,524)	\$ 1,296,248
9	Net CIAC	<u>5,834,806</u>	<u>294,758</u>	<u>\$ 6,129,564</u>
10				
11	Advances in Aid of Construction (AIAC)	30,374,274	-	30,374,274
12				
13	Customer Meter Deposits	1,271,802	-	1,271,802
14	Customer Deposits	140,147	7,514	147,661
15	Deferred Income Tax Credits	1,459,075	(526,652)	932,423
16				
17				
18	<u>ADD:</u>			
19				
20				
21	Deferred Regulatory Assets TCE Plume	90,381	-	90,381
22				
23	Deferred Regulatory Assets	-	-	-
24				
25				
26	Original Cost Rate Base	<u>\$ 35,647,602</u>	<u>\$ (2,528,138)</u>	<u>\$ 33,119,464</u>

References:

Column [A]: Company as Filed

Column [B]: Schedule DWC-W4

Column (C): Column (A) + Column (B)

[A]

LINE NO.	ACCT. NO.	[A]	[B]	[C]	[D]	[E]	[F]	[G]
PLANT IN SERVICE			ADJ #1	ADJ #2	ADJ #3	ADJ #4	ADJ #5	ADJ #6
	DESCRIPTION	COMPANY AS FILED	Net Used Ref. Sch JMM-W/5	Accumulated Depreciation Ref. Sch JMM-W/6	True-Up of Accruals Ref. Sch JMM-W/7	Plant Additions Recorded in Wrong Years Ref. Sch JMM-W/8	Reclassification of Plant Ref. Sch JMM-W/9	Plant Not Used and Useful Ref. Sch JMM-W/10
1	Organization Cost	\$ 21,100	-	-	-	-	-	-
2	Franchise Cost	-	-	-	-	-	-	-
3	Land and Land Rights	1,456,278	-	-	-	-	-	-
4	Structures and Improvements	28,000,916	-	-	(178,617)	-	(2,776,772)	(12,156)
5	Collecting and Impounding Res.	-	-	-	-	-	-	-
6	Lake River and Other Intakes	-	-	-	-	-	-	-
7	Wells and Springs	3,097,345	-	-	(18,108)	-	134,878	-
8	Infiltration Galleries and Tunnels	-	-	-	-	-	-	-
9	Supply Mains	-	-	-	-	-	-	-
10	Power Generation Equipment	207,020	-	-	-	-	18,111	-
11	Electric Pumping Equipment	897,792	-	-	-	-	(16,947)	-
12	Water Treatment Plant	1,696,759	-	-	-	-	1,728,635	-
13	Water Treatment Equipment	-	-	-	-	-	-	-
14	Storage Tanks	-	-	-	-	-	901,841	-
15	Transmission and Distribution Mains	492,176	-	-	-	-	-	-
16	Services	40,259,045	-	-	-	-	-	-
17	333	5,350,963	-	-	-	-	-	-
18	334	4,759,560	-	-	-	-	-	-
19	335	3,304,755	-	-	-	-	-	-
20	336	38,367	-	-	-	-	-	-
21	339	259,531	-	-	-	-	-	-
22	340	651,098	-	-	-	-	-	-
23	340.1	-	-	-	-	-	-	-
24	341	307,592	-	-	-	-	7,985	-
25	342	37,143	-	-	-	-	-	-
26	343	47,434	-	-	-	-	-	-
27	344	5,803	-	-	-	-	-	-
28	345	-	-	-	-	-	-	-
29	346	128,402	-	-	-	-	-	-
30	347	-	-	-	-	-	-	-
31	348	132,312	-	-	-	-	(9,897)	-
32	Total Plant in Service - Sub Total	91,151,411	-	-	-	-	-	-
33								
34	Total Plant in Service	\$ 91,151,411	\$ -	\$ -	\$ (196,725)	\$ -	\$ (12,156)	\$ (12,156)
35	Less: Accumulated Depreciation	16,514,086	-	2,454,801	-	99,151	(27,948)	-
36								
37	Net Plant in Service	\$ 74,637,325	\$ -	\$ (2,454,801)	\$ (196,725)	\$ (99,151)	\$ 15,792	\$ (12,156)
38								
39	LESS:							
40	Contributions in Aid of Construction (CIAC)	\$ 7,324,578	-	-	-	-	-	-
41	Less: Accumulated Amortization	1,489,772	-	-	-	-	-	-
42	Net CIAC (1.25 - 1.26)	5,834,806	-	-	-	-	-	-
43	Advances in Aid of Construction (AIAC)	30,374,274	-	-	-	-	-	-
44	Customer Meter Deposits	1,271,802	-	-	-	-	-	-
45	Customer Deposits	140,147	-	-	-	-	-	-
46	Deferred Income Taxes	1,459,075	-	-	-	-	-	-
47								
48								
49	ADD:							
50	Deferred Regulatory Assets TCE Plume	90,381	-	-	-	-	-	-
51	Deferred Regulatory Assets	-	-	-	-	-	-	-
52								
53	Original Cost Rate Base	\$ 35,647,802	\$ -	\$ (2,454,801)	\$ (196,725)	\$ (99,151)	\$ 15,792	\$ (12,156)

[H]		[I]		[J]		[K]		[L]		[M]	
ADJ #7		ADJ #8		ADJ #9		ADJ #10		ADJ #11		STAFF	
Duplicate Invoices		Retirement of		Recalculation of		Customer		ADIT		ADJUSTED	
Ref: Sch JMM-W11		Ref: Sch JMM-W12		Ref: Sch JMM-W13		Ref: Sch JMM-W14		Ref: Sch JMM-W15			
\$		\$		\$		\$		\$		\$	
-		-		-		-		-		21,100	
-		-		-		-		-		1,444,122	
(3,000)		-		-		-		-		25,042,527	
-		-		-		-		-		-	
-		-		-		-		-		3,214,115	
-		-		-		-		-		-	
-		-		-		-		-		225,131	
-		-		-		-		-		880,845	
-		-		-		-		-		3,425,394	
-		-		-		-		-		-	
-		-		-		-		-		1,394,017	
-		-		-		-		-		40,259,045	
-		-		-		-		-		5,350,963	
-		-		-		-		-		4,759,560	
(2,608)		-		-		-		-		3,302,147	
-		-		-		-		-		38,367	
-		-		-		-		-		259,531	
-		-		-		-		-		651,098	
-		(17,555)		-		-		-		7,995	
-		-		-		-		-		290,037	
-		-		-		-		-		37,143	
-		-		-		-		-		47,434	
-		-		-		-		-		5,803	
-		-		-		-		-		128,402	
-		-		-		-		-		122,415	
-		-		-		-		-		90,907,211	
-		-		-		-		-		-	
\$		\$		\$		\$		\$		\$	
(5,608)		(17,555)		-		-		-		90,907,211	
(130)		(17,555)		-		-		-		19,022,404	
-		-		-		-		-		-	
\$		\$		\$		\$		\$		\$	
(5,477)		-		-		-		-		71,884,807	
-		-		-		-		-		-	
\$		\$		\$		\$		\$		\$	
-		-		101,234		-		-		7,425,812	
-		-		(193,524)		-		-		1,296,248	
-		-		294,758		-		-		6,129,564	
-		-		-		-		-		30,374,274	
-		-		-		-		-		1,271,802	
-		-		-		7,514		-		147,661	
-		-		-		-		(526,652)		932,423	
-		-		-		-		-		-	
-		-		-		-		-		90,381	
-		-		-		-		-		-	
\$		\$		\$		\$		\$		\$	
(5,477)		-		(294,758)		(7,514)		526,652		33,119,464	

Litchfield Park Service Company - Water Division
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Schedule DWC-W5

RATE BASE ADJUSTMENT NO. 1 - NOT USED

RATE BASE ADJUSTMENT NO. 2 - ACCUMULATED DEPRECIATION

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1		Accumulated Depreciation	\$ 16,514,086	\$ 2,454,801	18,968,887

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 3 - TRUE-UP OF PLANT IN SERVICE ACCRUALS

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	304	Structures and Improvements	\$ 28,000,916	\$ (178,617)	\$ 27,822,299
2	307	Wells and Springs	3,097,345	(18,108)	3,079,237
			<u>\$ 31,098,261</u>	<u>\$ (196,725)</u>	<u>\$ 30,901,536</u>

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 4 - PLANT ADDITIONS RECORDED IN WRONG YEARS

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1		Accumulated Depreciation	\$ 16,514,086	\$ 99,151	\$ 16,613,237

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 5 - RECLASSIFICATION OF PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A]		[B]		[C]	
			COMPANY PROPOSED		STAFF ADJUSTMENTS		STAFF ¹ RECOMMENDED	
1	304	Structure and Improvement	\$ 28,000,916	\$	(2,776,772)	\$	25,224,144	
2	311	Pumping Equipment	897,792		(16,947)		880,845	
3	348	Other Tangible Plant	132,312		(9,897)		122,415	
4	307	Wells and Springs	3,097,345		134,878		3,232,223	
5	310	Power Generation	207,020		18,111		225,131	
6	320.1	Water Treatment Plant	1,696,759		1,728,635		3,425,394	
7	330.1	Storage Tanks	492,176		901,841		1,394,017	
8	340.1	Computer Software	-		7,995		7,995	
9		Total	\$ 34,524,320	\$	(12,156)	\$	34,512,164	
10								
11		Accumulated Depreciation	\$ 16,514,086	\$	(27,948)		16,486,138	
12								
13								
14		Staff's Removal of Plant and Accumulated Depreciation						
15	2009	304 Structures and Improvement	\$		Adjustment (1,036,948)		Years (1/2 Conv.) 3.5	Depr Rate 3.33%
16	2010	304 Structures and Improvement			(1,245,500)		2.5	3.33%
17	2010	348 Other Tangible Plant			(9,897)		2.5	10.00%
18	2011	304 Structures and Improvement			(494,324)		1.5	3.33%
19	2011	311 Pumping Equipment			(68,958)		1.5	12.50%
20		Total Removal of Plant and Accumulated Depreciation			\$ (2,855,627)			\$ (264,639)
21								
22								
23		Staff's Reclassification of Plant and Accumulated Depreciation						
24	2009	307 Well and Springs	\$		Adjustment 65,920		Years (1/2 Conv.) 3.5	Depr Rate 3.33%
25	2009	311 Pumping Equipment			10,851		3.5	12.50%
26	2009	320.1 Water Treatment Plant			287,816		3.5	3.33%
27	2009	340.1 Computer Software			7,995		3.5	20.00%
28	2009	330.1 Storage Tanks			664,366		3.5	2.20%
29	2010	311 Pumping Equipment			13,620		2.5	12.50%
30	2010	320.1 Water Treatment Plant			1,215,221		2.5	3.30%
31	2010	330.1 Storage Tanks			20,000		2.5	2.22%
32	2010	340 Office Furniture and Equip			6,555		2.5	6.67%
33	2011	307 Wells and Springs			68,958		1.5	3.33%
34	2011	310 Power Generation			18,111		1.5	5.00%
35	2011	311 Pumping Equipment			20,984		1.5	12.50%
36	2011	320.1 Water Treatment Plant			225,598		1.5	3.33%
37	2011	330.1 Storage Tanks			217,475		1.5	2.22%
38		Total Reclassification of Plant and Accumulated Depreciation			\$ 2,843,470			\$ 236,691
39								
40		Net decrease to accumulated depreciation						\$ (27,948)
41								
42								

Note: Of the difference of \$12,157 (i.e. \$2,855,627 - \$2,843,470) \$6,000 is being reclassified to the Wastewater Division, and the remaining \$6,156.34 is not used and useful.

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

Litchfield Park Service Company - Water Division
Docket Nos. W-01428A-13-0043 and SW-01428A-13-0042
Test Year Ended: December 31, 2012

Schedule DWC-W10

RATE BASE ADJUSTMENT NO. 6 - PLANT NOT USED AND USEFUL

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	303	Land and Land Rights	\$ 1,456,278	\$ (12,156)	\$ 1,444,122
2					

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 7 - REMOVAL OF DUPLICATE INVOICES

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	304	Structures and Improvements	\$ 28,000,916	\$ (3,000)	\$ 27,997,916
2	335	Hydrants	3,304,755	(2,608)	3,302,147
3		Total	\$ 31,305,671	\$ (5,608)	\$ 31,300,063
4					
5		Accumulated Depreciation	\$ 16,514,086	\$ (130)	\$ 16,513,956
6					
7			PIS	Years	Depr
8	Staff's Calculation		Adjustment	(1/2 Conv.)	Rate
9	335 Hydrants		\$ (2,608)	2.5	2.00%
10					\$ (130)

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

Litchfield Park Service Company - Water Division
Docket Nos. W-01428A-13-0043 and SW-01428A-13-0042
Test Year Ended: December 31, 2012

Schedule DWC-W12

RATE BASE ADJUSTMENT NO. 8 RETIREMENT OF TRANSPORTATION EQUIPMENT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	341	Transportation Equipment	\$ 307,592	\$ (17,555)	\$ 290,037
2					
3		Accumulated Depreciation	\$ 16,514,086	\$ (17,555)	\$ 16,496,531

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 9 RECALCULATION OF CONTRIBUTIONS IN AID OF CONSTRUCTION

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1		Contributions in Aid of Construction	\$ 7,324,578	\$ 101,234	\$ 7,425,812
2					
3		Amortization of Contributions in Aid of Construction	\$ 1,489,772	\$ (193,524)	\$ 1,296,248

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 10 - CUSTOMER DEPOSITS

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1		Customer Deposits	\$ 140,147	\$ 7,514	\$ 147,661
2					
3		Staff Calculation:			
4		13th month average of customer deposits	\$ 311,436		
5		December 31th amount	295,587		
6		Increase over December 31 test year amount	\$ 15,849		
7					
8		Allocated to Water	\$ 7,514		
9		Allocated to Wastewater	8,334		
10		Total	\$ 15,849		

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

Litchfield Park Service Company - Water Division
Docket Nos. W-01428A-13-0043 and SW-01428A-13-0042
Test Year Ended: December 31, 2012

Schedule DWC-W15

RATE BASE ADJUSTMENT NO. 11 - ACCUMULATED DEFERRED INCOME TAXES

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1		Deferred Income Taxes	\$ 1,459,075	\$ (526,652)	\$ 932,423

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
1	<u>REVENUES:</u>					
2	Metered Water Sales	\$ 10,965,667	\$ -	\$ 10,965,667	\$ 1,074,737	\$ 12,040,404
3	Water Sales-Unmetered	-	-	-	-	-
4	Other Operating Revenue	235,723	-	235,723	-	235,723
5	Intentionally Left Blank	-	-	-	-	-
6	Total Operating Revenues	<u>\$ 11,201,390</u>	<u>\$ -</u>	<u>\$ 11,201,390</u>	<u>\$ 1,074,737</u>	<u>\$ 12,276,127</u>
7						
8	<u>OPERATING EXPENSES:</u>					
9	Salaries and Wages	\$ 1,069,839	\$ -	\$ 1,069,839	\$ -	\$ 1,069,839
10	Purchased Water	2,615	-	2,615	-	2,615
11	Purchased Power	903,527	-	903,527	-	903,527
12	Fuel for Power Production	-	-	-	-	-
13	Chemicals	208,080	-	208,080	-	208,080
14	Repairs and Maintenance	91,139	-	91,139	-	91,139
15	Office Supplies and Expense	-	-	-	-	-
16	Management Services - US Liberty Water	1,260,835	(27,089)	1,233,746	-	1,233,746
17	Management Services - Corporate	781,023	-	781,023	-	781,023
18	Outside Services - Accounting	9,271	-	9,271	-	9,271
19	Outside Services - Other	103,412	-	103,412	-	103,412
20	Outside Services - Legal	19,865	-	19,865	-	19,865
21	Water Testing	66,942	(4,464)	62,478	-	62,478
22	Rents Equipment	7,229	-	7,229	-	7,229
23	Transportation Expenses	103,726	-	103,726	-	103,726
24	Insurance - General Liability	88,374	-	88,374	-	88,374
25	Insurance - Vehicle	20,825	-	20,825	-	20,825
26	Reg. Comm. Exp. - Other	19,721	-	19,721	-	19,721
27	Reg. Comm. Exp. - Rate Case	65,800	-	65,800	-	65,800
28	Interest on Customer Deposits	-	-	5,931	-	5,931
29	Miscellaneous Expenses	151,237	-	151,237	-	151,237
30	Bad Debt Expense	(76)	-	(76)	-	(76)
31	Depreciation and Amortization Expense	2,615,868	22,525	2,638,393	-	2,638,393
32	Property Taxes	559,128	(27,957)	531,171	17,070	548,241
33	Income Taxes	1,028,634	25,440	1,054,074	404,981	1,459,054
34	Intentionally Left Blank	-	-	-	-	-
35	Total Operating Expenses	<u>\$ 9,177,014</u>	<u>\$ (11,545)</u>	<u>\$ 9,171,400</u>	<u>\$ 422,050</u>	<u>\$ 9,593,450</u>
36	Operating Income (Loss)	<u>\$ 2,024,376</u>	<u>\$ 11,545</u>	<u>\$ 2,029,990</u>	<u>\$ 652,686</u>	<u>\$ 2,682,677</u>

References:

Column (A): Company Schedule C-1
Column (B): Schedule DWC-W17
Column (C): Column (A) + Column (B)
Column (D): Schedules DWC-W24 and DWC-W25
Column (E): Column (C) + Column (D)

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Water Testing Expense ADJ #1 Ref. Sch JMM-W18	[C] Corporate Allocation True-Up ADJ #2 Ref. Sch JMM-W19	[D] Corporate Allocation Expense ADJ #3 Ref. Sch JMM-W20	[E] Interest on Customer Deposits ADJ #4 Ref. Sch JMM-W21	[F] Depreciation Expense ADJ #5 Ref. Sch JMM-W22	[G] Property Tax Expense ADJ #6 Ref. Sch JMM-W23	[H] Income Tax Expense ADJ #7 Ref. Sch JMM-W24	[I] STAFF ADJUSTED
1	REVENUES:									
2	Metered Water Sales	\$ 10,965,667	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,965,667
3	Water Sales-Unmetered	-	-	-	-	-	-	-	-	-
4	Other Operating Revenue	235,723	-	-	-	-	-	-	-	235,723
5	Intentionally Left Blank	-	-	-	-	-	-	-	-	-
6	Total Operating Revenues	\$ 11,201,390	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,201,390
7	OPERATING EXPENSES:									
8	Salaries and Wages	\$ 1,069,839	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,069,839
9	Purchased Water	2,615	-	-	-	-	-	-	-	2,615
10	Purchased Power	903,527	-	-	-	-	-	-	-	903,527
11	Fuel for Power Production	-	-	-	-	-	-	-	-	-
12	Chemicals	208,080	-	-	-	-	-	-	-	208,080
13	Repairs and Maintenance	91,139	-	-	-	-	-	-	-	91,139
14	Office Supplies and Expense	-	-	-	-	-	-	-	-	-
15	Management Services - US Liberty Water	1,260,835	-	(8,420)	(18,669)	-	-	-	-	1,233,746
16	Management Services - Corporate	781,023	-	-	-	-	-	-	-	781,023
17	Outside Services - Accounting	9,271	-	-	-	-	-	-	-	9,271
18	Outside Services - Other	103,412	-	-	-	-	-	-	-	103,412
19	Water Testing	19,865	-	-	-	-	-	-	-	19,865
20	Outside Services - Legal	66,942	(4,464)	-	-	-	-	-	-	62,478
21	Rents Equipment	7,229	-	-	-	-	-	-	-	7,229
22	Transportation Expenses	103,726	-	-	-	-	-	-	-	103,726
23	Insurance - General Liability	88,374	-	-	-	-	-	-	-	88,374
24	Insurance - Vehicle	20,825	-	-	-	-	-	-	-	20,825
25	Reg Comm. Exp. - Other	19,721	-	-	-	-	-	-	-	19,721
26	Reg Comm. Exp. - Rate Case	65,800	-	-	-	-	-	-	-	65,800
27	Interest on Customer Deposits	-	-	-	-	5,931	-	-	-	5,931
28	Miscellaneous Expenses	151,237	-	-	-	-	-	-	-	151,237
29	Bad Debt Expense	(76)	-	-	-	-	-	-	-	(76)
30	Depreciation and Amortization Expense	2,615,868	-	-	-	-	22,525	-	-	2,638,393
31	Property Taxes	559,128	-	-	-	-	-	(27,957)	-	531,171
32	Income Taxes	1,026,634	-	-	-	-	-	-	25,440	1,054,074
33	Intentionally Left Blank	-	-	-	-	-	-	-	-	-
34	Total Operating Expenses	\$ 9,177,014	\$ (4,464)	\$ (8,420)	\$ (18,669)	\$ 5,931	\$ 22,525	\$ (27,957)	\$ 25,440	\$ 9,171,401
35	Operating Income (Loss)	\$ 2,024,376	\$ 4,464	\$ 8,420	\$ 18,669	\$ (5,931)	\$ (22,525)	\$ 27,957	\$ (25,440)	\$ 2,029,989

Litchfield Park Service Company - Water Division
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Test Year Ended: December 31, 2012

Schedule DWC-W18

OPERATING INCOME ADJUSTMENT NO. 1 - Water Testing

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	Water Testing	\$ 66,942	\$ (4,464)	\$ 62,478

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 2 - CORPORATE EXPENSE TRUE-UP

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	Management Services - US Liberty Water	\$ 1,260,835	\$ (8,420)	\$ 62,478
2				
3				
4	Staff's Calculation			
5	Accrual Adjustment	\$ 29,297		
6	Allocated to Water	28.74%	\$ 8,420	
7	Allocated to Wastewater	26.87%	\$ 7,872	

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 3 - CORPORATE ALLOCATION EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	Management Services - US Liberty Water	\$ 1,260,835	\$ (18,669)	\$ 1,242,166

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 4 - INTEREST ON CUSTOMER DEPOSITS

		[A]	[B]	[C]
LINE NO.	DESCRIPTION	COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	Interest on Customer Deposits	\$ -	\$ 5,931	\$ 5,931
2				
3	Staff's Calculation			
4	Allocated to Water		\$ 5,346	
5	Allocated to Wastewater		5,931	
6	Total		\$ 11,277	

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 5 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A] PLANT In SERVICE Per Staff	[B] NonDepreciable or Fully Depreciated PLANT	[C] DEPRECIABLE PLANT (Col A - Col B)	[D] DEPRECIATION RATE	[E] DEPRECIATION EXPENSE (Col C x Col D)
1	301	Organization Cost	\$ 21,100	\$ 21,100	\$ -	0.00%	\$ -
2	302	Franchise Cost	\$ -	\$ -	\$ -	0.00%	\$ -
3	303	Land and Land Rights	\$ 1,444,122	\$ 1,450,278	\$ (6,156)	0.00%	\$ -
4	304	Structures and Improvements	\$ 25,042,527	\$ -	\$ 25,042,527	3.33%	\$ 833,916
5	305	Collecting and Impounding Res.	\$ -	\$ -	\$ -	2.50%	\$ -
6	306	Lake River and Other Intakes	\$ -	\$ -	\$ -	2.50%	\$ -
7	307	Wells and Springs	\$ 3,214,115	\$ -	\$ 3,214,115	3.33%	\$ 107,030
8	308	Infiltration Galleries and Tunnels	\$ -	\$ -	\$ -	6.67%	\$ -
9	309	Supply Mains	\$ -	\$ -	\$ -	2.00%	\$ -
10	310	Power Generation Equipment	\$ 225,131	\$ -	\$ 225,131	5.00%	\$ 11,257
11	311	Electric Pumping Equipment	\$ 880,845	\$ -	\$ 880,845	12.50%	\$ 110,106
12	320	Water Treatment Equipment	\$ 3,425,394	\$ -	\$ 3,425,394	3.33%	\$ 114,066
13	320	Water Treatment Plant	\$ -	\$ -	\$ -	3.33%	\$ -
14	330	Distribution Reservoirs & Standpipe	\$ 1,394,017	\$ -	\$ 1,394,017	2.22%	\$ 30,947
15	331	Transmission and Distribution Mains	\$ 40,259,045	\$ -	\$ 40,259,045	2.00%	\$ 805,181
16	333	Services	\$ 5,350,963	\$ -	\$ 5,350,963	3.33%	\$ 178,187
17	334	Meters	\$ 4,759,560	\$ -	\$ 4,759,560	8.33%	\$ 396,471
18	335	Hydrants	\$ 3,302,147	\$ -	\$ 3,302,147	2.00%	\$ 66,043
19	336	Backflow Prevention Devices	\$ 38,387	\$ -	\$ 38,387	6.67%	\$ 2,560
20	339	Other Plant and Miscellaneous Equipment	\$ 259,531	\$ -	\$ 259,531	6.67%	\$ 17,311
21	340	Office Furniture and Fixtures	\$ 651,098	\$ -	\$ 651,098	6.67%	\$ 43,428
22	340.1	Computer and Software	\$ 7,995	\$ -	\$ 7,995	20.00%	\$ 1,599
23	341	Transportation Equipment	\$ 290,037	\$ -	\$ 290,037	20.00%	\$ 58,007
24	342	Stores Equipment	\$ 37,143	\$ -	\$ 37,143	4.00%	\$ 1,486
25	343	Tools and Work Equipment	\$ 47,434	\$ -	\$ 47,434	5.00%	\$ 2,372
26	344	Laboratory Equipment	\$ 5,803	\$ -	\$ 5,803	10.00%	\$ 580
27	345	Power Operated Equipment	\$ -	\$ -	\$ -	5.00%	\$ -
28	346	Communications Equipment	\$ 128,402	\$ -	\$ 128,402	10.00%	\$ 12,840
29	347	Miscellaneous Equipment	\$ -	\$ -	\$ -	10.00%	\$ -
30	348	Other Tangible Plant	\$ 122,415	\$ -	\$ 122,415	10.00%	\$ 12,241
31		Total Plant	\$ 90,907,211	\$ 1,471,378	\$ 89,435,833		\$ 2,805,629
32							
33		Less: Amortization of Contributions					
34	307	Wells and Springs	\$ 499,000			3.33%	\$ (16,617)
35	311	Electric Pumping Equipment	\$ 40,572			12.50%	\$ (5,072)
36	331	Trans. and Dist. Mains	\$ 5,893,218			2.00%	\$ (117,864)
37	333	Services	\$ 772,209			3.33%	\$ (25,715)
38	334	Meters	\$ 29,899			8.33%	\$ -
39	335	Hydrants	\$ 98,419			2.00%	\$ (1,968)
40			\$ 7,333,317				\$ (167,236)
41							
42		Total Depreciation Expense					\$ 2,638,393
43							
44		Depreciation Expense - Company					\$ 2,615,868
45							
46		Staff's Adjustment to Depreciation Expense					\$ 22,525

*Fully Depreciated/Amortized

References:

Column [A]: Schedule DWC-W16
Column [B]: From Column [A]
Column [C]: Column [A] - Column [B]
Column [D]: Engineering Staff Report
Column [E]: Column [C] x Column [D]

OPERATING INCOME ADJUSTMENT NO. 6 - PROPERTY TAX EXPENSE

LINE NO.		[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$ 11,201,390	\$ 11,201,390
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	22,402,780	\$ 22,402,780
4	Staff Recommended Revenue, Per Schedule JMM-W1	11,201,390	\$ 12,276,127
5	Subtotal (Line 4 + Line 5)	33,604,170	34,678,907
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	11,201,390	\$ 11,559,636
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	22,402,780	\$ 23,119,271
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	107,049	\$ 107,049
12	Full Cash Value (Line 9 + Line 10 - Line 11)	22,295,731	\$ 23,012,222
13	Assessment Ratio	19.0%	19.0%
14	Assessment Value (Line 12 * Line 13)	4,236,189	\$ 4,372,322
15	Composite Property Tax Rate (Per Company Schedule)	12.5389%	12.5389%
16			\$ -
17	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 531,171	
18	Company Proposed Property Tax	559,128	
19			
20	Staff Test Year Adjustment (Line 16-Line 17)	\$ (27,957)	
21	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 548,241
22	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 531,171
23	Increase in Property Tax Expense Due to Increase in Revenue Requirement		\$ 17,070
24			
25	Increase to Property Tax Expense		\$ 17,070
26	Increase in Revenue Requirement		1,074,737
27	Increase to Property Tax per Dollar Increase in Revenue (Line 19/Line 20)		1.588260%

REFERENCES:

Column [A]: Company Filing
Column [B]: Testimony DWC
Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 7 - TEST YEAR INCOME TAXES

LINE NO.	DESCRIPTION		Test Year
1			
2			
3			
4	<i>Calculation of Income Tax:</i>		
5	Revenue (Schedule JMM-11)	\$	11,201,390
6	Operating Expenses Excluding Income Taxes	\$	8,117,326
7	Synchronized Interest (L17)	\$	331,195
8	Arizona Taxable Income (L1 - L2 - L3)	\$	2,752,869
9	Arizona State Income Tax Rate		6.5000%
10	Arizona Income Tax (L4 x L5)	\$	178,936
11	Federal Taxable Income (L4 - L6)	\$	2,573,933
12	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$	7,500
13	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$	6,250
14	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$	8,500
15	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$	91,650
16	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$	761,237
17	Total Federal Income Tax	\$	875,137
18	Combined Federal and State Income Tax (L44 + L51)	\$	1,054,074
19			
20			
21	<i>Calculation of Interest Synchronization:</i>		
22	Rate Base (Schedule JMM-W4)	\$	33,119,464
23	Weighted Average Cost of Debt		1.10%
24	Synchronized Interest (L16 x L17)	\$	364,314
25			
26			
27	Income Tax - Per Staff	\$	1,054,074
28	Income Tax - Per Company	\$	1,028,634
29	Staff Adjustment	\$	25,440

REFERENCES:

Column [A]: Company Filing
Column [B]: Testimony DWC
Column [C]: Column [A] + Column [B]

Litchfield Park Service Company - Wastewater Division
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Direct Testimony of Darron W. Carlson

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Schedule DWC-WW1

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY FAIR VALUE	(B) STAFF FAIR VALUE
1	Adjusted Rate Base	\$ 23,877,697	\$ 23,424,640
2	Adjusted Operating Income (Loss)	\$ 1,871,616	\$ 1,932,525
3	Current Rate of Return (L2 / L1)	7.84%	8.25%
4	Required Rate of Return	9.50%	8.10%
5	Required Operating Income (L4 * L1)	\$ 2,268,786	\$ 1,897,396
6	Operating Income Deficiency (L5 - L2)	\$ 397,170	\$ (35,129)
7	Gross Revenue Conversion Factor	1.6595	1.6496
8	Required Revenue Increase (L7 * L6)	\$ 659,088	\$ (57,949)
9	Adjusted Test Year Revenue	\$ 10,361,603	\$ 10,361,603
10	Proposed Annual Revenue (L8 + L9)	\$ 11,020,691	\$ 10,303,654
11	Required Increase in Revenue (%)	6.36%	-0.56%

References:

Column (A): Company Schedule A-1

Column (B): Staff Schedules DWC-W3 and DWC-W16

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	39.3790%			
5	Subtotal (L3 - L4)	60.6210%			
6	Revenue Conversion Factor (L1 / L5)	1.649594			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 23)	38.2900%			
9	One Minus Combined Income Tax Rate (L7 - L8)	61.7100%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)	0.0000%			
<u>Calculation of Effective Tax Rate:</u>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.5000%			
14	Federal Taxable Income (L12 - L13)	93.5000%			
15	Applicable Federal Income Tax Rate (Line 55)	34.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	31.7900%			
17	Combined Federal and State Income Tax Rate (L13 + L16)		38.2900%		
<u>Calculation of Effective Property Tax Factor:</u>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (L17)	38.2900%			
20	One Minus Combined Income Tax Rate (L18-L19)	61.7100%			
21	Property Tax Factor	1.7647%			
22	Effective Property Tax Factor (L20*L21)		1.0890%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			39.3790%	
24	Required Operating Income	\$ 1,897,396			
25	Adjusted Test Year Operating Income (Loss)	1,932,525			
26	Required Increase in Operating Income (L24 - L25)		\$ (35,129)		
27	Income Taxes on Recommended Revenue (Col. [E], L52)	\$ 1,031,956			
28	Income Taxes on Test Year Revenue (Col. [B], L52)	1,053,753			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		(21,797)		
30	Recommended Revenue Requirement	\$ 10,303,654			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)				
35	Property Tax with Recommended Revenue	\$ 546,202			
36	Property Tax on Test Year Revenue	547,225			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		(1,023)		
38	Total Required Increase in Revenue (L26 + L29 + L34 + L37)		\$ (57,949)		
<u>Calculation of Income Tax:</u>					
39	Revenue	\$ 10,361,603	\$ (57,949)	\$ 10,303,654	
40	Operating Expenses Excluding Income Taxes	\$ 7,375,325		\$ 7,374,303	
41	Synchronized Interest (L56)	\$ 234,246		\$ 234,246	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 2,752,031		\$ 2,695,105	
43	Arizona State Income Tax Rate	6.5000%		6.5000%	
44	Arizona Income Tax (L42 x L43)	\$ 178,882		\$ 175,182	
45	Federal Taxable Income (L42 - L44)	\$ 2,573,149		\$ 2,519,923	
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 7,500		\$ 7,500	
47	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ 6,250		\$ 6,250	
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ 8,500		\$ 8,500	
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ 91,650		\$ 91,650	
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ 760,971		\$ 742,874	
51	Total Federal Income Tax	\$ 874,871		\$ 856,774	
52	Combined Federal and State Income Tax (L44 + L51)	\$ 1,053,753		\$ 1,031,956	
53	Applicable Federal Income Tax Rate [Col. [E], L51 - Col. [B], L51] / [Col. [E], L45 - Col. [B], L45]			34.0000%	
<u>Calculation of Interest Synchronization:</u>					
54	Rate Base	\$ 23,424,640			
55	Weighted Average Cost of Debt	1.0000%			
56	Synchronized Interest (L45 X L46)	\$ 234,246			

Litchfield Park Service Company - Wastewater Division
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Schedule DWC-WW3

RATE BASE - ORIGINAL COST

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	(C) STAFF AS ADJUSTED
1	Plant in Service	\$ 74,024,533	\$ 73,396,759
2	Less: Accumulated Depreciation	13,244,186	13,256,719
3	Net Plant in Service	<u>\$ 60,780,347</u>	<u>\$ 60,140,040</u>
<u>LESS:</u>			
4	Contributions in Aid of Construction (CIAC)	\$ 28,470,485	\$ 28,376,915
5	Less: Accumulated Amortization	<u>4,446,775</u>	<u>\$ 4,153,301</u>
6	Net CIAC	24,023,710	\$ 24,223,614
7	Advances in Aid of Construction (AIAC)	11,645,290	11,645,290
8	Customer Meter Deposits	95,892	95,892
	Customer Deposits	155,440	163,774
9	Deferred Income Tax Credits	982,318	586,830
<u>ADD:</u>			
9	Deferred Regulatory Assets TCE Plume	-	-
10	Deffered Regulatory Assets	-	-
11	Original Cost Rate Base	<u>\$ 23,877,697</u>	<u>\$ 23,424,640</u>

References:

Column [A]: Company as Filed

Column [B]: Schedule DWC-W4

Column (C): Column (A) + Column (B)

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	[A]	[B]	[C]	[D]	[E]	[F]	[G]
			ADJ #1 Post-Test Year Plant	ADJ #2 Not used	ADJ #3 True-Up of Accruals	ADJ #4 Plant Additions Recorded in Wrong Years	ADJ #5 Reclassification of Plant	ADJ #6 Plant Not Used and Useful
			Ref: Sch JMM-WW5	Ref: Sch JMM-WW6	Ref: Sch JMM-WW7	Ref: Sch JMM-WW8	Ref: Sch JMM-WW9	Ref: Sch JMM-WW10
PLANT IN SERVICE:								
1	351	Organization						
2	352	Franchises						
3	353	Land and Land Rights						
4	354	Structures and Improvements						
5	355	Power Generation Equipment						
6	360	Collection Services - Force						
7	361	Collection Services - Gravity						
8	362	Special Collecting Structures						
9	363	Services to Customers						
10	364	Flow Measuring Devices						
11	365	Flow Measuring Installations						
12	366	Reuse Services						
13	367	Reuse Meters and Installations						
14	370	Receiving Wells						
15	371	Effluent Pumping Equipment						
16	374	Reuse Trans. And Dist. System						
17	375	Reuse T&D						
18	380	Treatment and Disposal Equipment						
19	381	Plant Sewers						
20	382	Outfall Sewer Lines						
21	389	Other Plant & Misc. Equipment						
22	390	Office Furniture & Equipment						
23	391	Transportation Equipment						
24	392	Stores Equipment						
25	393	Tools, Shop & Garage Equipment						
26	394	Laboratory Equipment						
27	395	Power Operated Equipment						
28	396	Communication Equipment						
29	398	Other Tangible Plant						
30		Total Plant in Service - Sub Total						
31								
32								
33		Total Plant in Service						
34		Less: Accumulated Depreciation						
35								
36		Net Plant in Service						
37								
38		LESS:						
39		Contributions in Aid of Construction (CIAC)						
40		Less: Accumulated Amortization						
41		Net CIAC (L25 - L28)						
42		Advances in Aid of Construction (AIAC)						
43		Customer Meter Deposits						
44		Customer Deposits						
45		Deferred Income Taxes						
46								
47								
48		ADD:						
49		Deferred Regulatory Assets TCE Plume						
50		Deferred Regulatory Assets						
51								
52		Original Cost Rate Base						

[H] ADJ #7	[I] ADJ #8	[J] ADJ #9 Recalculation of CIAC	[K] ADJ #10 Customer Deposits	[L] ADJ #11 ADIT	[M] STAFF ADJUSTED
Duplicate Invoices Ref: Sch JMM-WW11	Not Used Ref: Sch JMM-WW12	Ref: Sch JMM-WW13	Ref: Sch JMM-WW14	Ref: Sch JMM-WW15	
\$	\$	\$	\$	\$	\$
(3,409)	-	-	-	-	1,835,956
(400)	-	-	-	-	23,768,875
-	-	-	-	-	602,932
-	-	-	-	-	1,162,597
-	-	-	-	-	31,928,244
-	-	-	-	-	76,190
-	-	-	-	-	48,210
-	-	-	-	-	36,618
-	-	-	-	-	4,057,660
-	-	-	-	-	44,753
-	-	-	-	-	860,393
-	-	-	-	-	861,151
-	-	-	-	-	62,286
-	-	-	-	-	420,334
-	-	-	-	-	5,356,062
-	-	-	-	-	47,802
(864)	-	-	-	-	343,681
-	-	-	-	-	827,629
-	-	-	-	-	275,740
-	-	-	-	-	33,497
-	-	-	-	-	8,968
-	-	-	-	-	129,950
-	-	-	-	-	187,184
-	-	-	-	-	6,805
-	-	-	-	-	415,441
(214)	-	-	-	-	73,396,759
\$	\$	\$	\$	\$	\$
(4,886)	-	-	-	-	73,396,759
(4,886)	-	-	-	-	13,256,719
\$	\$	\$	\$	\$	\$
(4,886)	-	-	-	-	60,140,040
\$	\$	\$	\$	\$	\$
-	-	(93,570)	-	-	28,376,915
-	-	(293,474)	-	-	4,153,301
-	-	199,904	-	-	24,223,614
-	-	-	-	-	11,645,290
-	-	-	-	-	95,892
-	-	-	8,334	(395,486)	163,774
-	-	-	-	-	586,830
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
(4,886)	\$	(199,904)	\$	(8,334)	\$
\$	\$	\$	\$	\$	\$
-	-	-	-	-	395,488
-	-	-	-	-	23,424,640

RATE BASE ADJUSTMENT NO. 1 - POST TEST-YEAR PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	380	Treatment and Disposal Equipment	\$ 5,585,470	\$ (700,000)	\$ 4,885,470

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

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Schedule DWC-WW6

RATE BASE ADJUSTMENT NO. 2 - NOT USED

RATE BASE ADJUSTMENT NO. 3 - TRUE-UP OF PLANT IN SERVICE ACCRUALS

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	354	Structures and Improvements	\$ 24,208,314	\$ 199,000	\$ 24,407,314
2	396	Communications Equipment	418,996	(3,555)	415,441
3			<u>\$ 24,627,310</u>	<u>\$ 195,445</u>	<u>\$ 24,822,755</u>

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 4 - PLANT ADDITIONS RECORDED IN WRONG YEARS

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1		Accumulated Depreciation	\$ 13,244,186	\$ 401	\$ 13,244,587

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 5 - RECLASSIFICATION OF PLANT IN SERVICE

LINE NO.	ACCT NO.	DESCRIPTION	[A]		[B]		[C]	
			COMPANY PROPOSED	ADJUSTMENTS	STAFF RECOMMENDED	STAFF ¹		
1	354	Structure and Improvement						
2	361	Collection Services - Gravity	\$ 24,208,314	\$ (525,110)	\$ 23,683,204			
3	365	Flow Measuring Installation	31,886,680	41,564	31,928,244			
4	371	Effluent Pumping Equipment		36,618	36,618			
5	380	Wastewater Treatment and Disposal Equipment	799,481	61,670	861,151			
6	389	Other Plant & Misc Equipment	5,585,470	470,592	6,056,062			
7	393	Tools, Shop & Garage Equipment	871,498	(43,005)	828,493			
8	394	Lab Equipment	145,631	(15,681)	129,950			
9	395	Power Operated Equipment	186,348	836	187,184			
10		Total	28,090	(21,485)	6,605			
11		Accumulated Depreciation	\$ 63,711,512	\$ 6,000	\$ 63,717,512			
12								
13			\$ 16,514,086	\$ 18,194	\$ 16,532,280			
14		Staffs Removal of Plant and Accumulated Depreciation						
15	2009	354	Structures and Improvement	PIIS Adjustment	Years (1/2 Conv.)	Dep'r Rate	A/D Adjustment	
16	2011	354	Structures and Improvement	(465,350)	3.5	3.33%	\$ (54,237)	
17	2009	380	Wastewater Treatment and Disposal Equipment	(59,760)	1.5	3.33%	(2,985)	
18	2009	389	Other Plant & Misc Equipment	(37,454)	3.5	5.00%	(6,555)	
19	2012	393	Tools, Shop & Garage Equipment	(43,005)	3.5	6.67%	(10,039)	
20	2012	393	Tools, Shop & Garage Equipment	(15,681)	0.5	5.00%	(392)	
21	2012	395	Power Operated Equipment	(21,485)	0.5	10.00%	(1,074)	
22		Total Removal of Plant and Accumulated Depreciation		\$ (642,735)			\$ (75,282)	
23								
24		Staffs Reclassification of Plant and Accumulated Depreciation						
25	2009	361	Collection Sewer	PIIS Adjustment	Years (1/2 Conv.)	Dep'r Rate	A/D Adjustment	
26	2009	365	Flow measuring installation	41,564	3.5	2.00%	\$ 2,910	
27	2009	371	Effluent Pumping Equipment	36,618	3.5	2.00%	2,563	
28	2011	371	Effluent Pumping Equipment	5,048	3.5	12.50%	2,208	
29	2012	371	Effluent Pumping Equipment	6,000	0.5	12.50%	375	
30	2009	380	Wastewater Treatment and Disposal Equipment	50,622	3.5	12.50%	3,164	
31	2012	380	Wastewater Treatment and Disposal Equipment	461,742	3.5	5.00%	80,805	
32	2009	380	Wastewater Treatment and Disposal Equipment	46,304	0.5	5.00%	1,158	
33		394	Lab Equipment	836	3.5	10.00%	293	
34		Total Reclassification of Plant and Accumulated Depreciation		\$ 648,735			\$ 93,475	
35		Net increase to accumulated depreciation					\$ 18,194	
36								
37		Note: The \$6,000 difference represents the reclassification of plant from the Water Division.						

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing
Column [B]: Testimony DWC
Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 6 - PLANT NOT USED AND USEFUL

LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF ¹ RECOMMENDED		
1	353	Land and Land Right	\$ 1,850,582	\$ (11,217)	\$ 1,839,365		
2							
3	354	Structures and Improvements	\$ 24,208,314	\$ (113,329)	\$ 24,094,985		
4							
5		Accumulated Depreciation	\$ 13,244,186	\$ (5,661)	\$ 13,238,525		
6							
7							
8	Staff's Removal of Plant and Accumulated Depreciation			PIS Adjustment	Years (1/2 Conv.)	Depr Rate	A/D Adjustment
9	2011	354 Structures and Improvment		\$ (113,329)	1.5	3.33%	\$ (5,661)

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 7 - REMOVAL OF DUPLICATE INVOICES

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	353	Land and Land Rights	\$ 1,850,582	\$ (3,409)	\$ 1,847,173
2	355	Power Generation Equipment	603,332	(400)	602,932
3	389	Other Plant & Misc. Equipment	871,498	(864)	870,634
4		Total	<u>\$ 3,325,412</u>	<u>\$ (4,672)</u>	<u>\$ 3,320,740</u>
5					
6		Accumulated Depreciation	<u>\$ 16,514,086</u>	<u>\$ (214)</u>	<u>\$ 16,513,872</u>
7					
8			PIS	Years	Depr
9	Staff's Calculation		Adjustment	(1/2 Conv.)	Rate
10	355	Power Generation Equipment	(400)	3.5	5.00%
11					
12	389	Other Plant & Misc. Equipment	<u>\$ (864)</u>	<u>2.5</u>	<u>6.67%</u>
					<u>\$ (144)</u>

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing
Column [B]: Testimony DWC
Column [C]: Column [A] + Column [B]

Litchfield Park Service Company - Wastewater Division
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Test Year Ended: December 31, 2012

Schedule DWC-WW12

RATE BASE ADJUSTMENT NO. 8 - NOT USED

RATE BASE ADJUSTMENT NO. 9 RECALCULATION OF CONTRIBUTIONS IN AID OF CONSTRUCTION

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1		Contributions in Aid of Construction	\$ 28,470,485	\$ (93,570)	\$ 28,376,915
2					
3		Amortization of Contributions in Aid of Construction	\$ 4,446,775	\$ (293,474)	\$ 4,153,301

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 10 - CUSTOMER DEPOSITS

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1		Customer Deposits	\$ 155,440	\$ 8,334	\$ 163,774

Staff Calculation:

13th month average of customer deposits	\$ 311,436
December 31th amount	295,587
Increase over December 31 test year amount	<u>\$ 15,849</u>

Allocated to Water	\$ 7,514
Allocated to Wastewater	8,334
Total	<u>\$ 15,849</u>

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing
Column [B]: Testimony DWC
Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 11 - ACCUMULATED DEFERRED INCOME TAXES

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1		Deferred Income Taxes	\$ 982,318	\$ (395,488)	\$ 586,830

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
1	REVENUES:					
2	Metered Water Sales	\$ 9,853,383	\$ -	\$ 9,853,383	\$ (57,949)	\$ 9,795,434
3	Water Sales-Unmetered	-	-	-	-	-
4	Other Operating Revenue	508,220	-	508,220	-	508,220
5	Intentionally Left Blank	-	-	-	-	-
6	Total Operating Revenues	\$ 10,361,603	\$ -	\$ 10,361,603	\$ (57,949)	\$ 10,303,654
7						
8	OPERATING EXPENSES:					
9	Salaries and Wages	\$ 1,168,151	\$ -	\$ 1,168,151	\$ -	\$ 1,168,151
10	Purchased Water	26,656	-	26,656	-	26,656
11	Purchased Power	601,635	-	601,635	-	601,635
12	Sludge Removal Expense	234,893	3,410	238,303	-	238,303
13	Chemicals	357,986	-	357,986	-	357,986
14	Materials and Supplies	86,994	-	86,994	-	86,994
15	Management Services - US Liberty Water	1,469,058	(32,398)	1,436,660	-	1,436,660
16	Management Services - Corporate	698,951	-	698,951	-	698,951
17	Outside Services - Accounting	2,161	-	2,161	-	2,161
18	Outside Services - Engineering	-	-	-	-	-
19	Outside Services- Other	222,303	-	222,303	-	222,303
20	Outside Services- Legal	25,746	-	25,746	-	25,746
21	Water Testing	57,735	(35,730)	22,005	-	22,005
22	Rents - Office	40,007	-	40,007	-	40,007
23	Equipment Rental	3,076	-	3,076	-	3,076
24	Transportation Expenses	26,465	-	26,465	-	26,465
25	Insurance - General Liability	57,823	-	57,823	-	57,823
26	Insurance - Vehicle	11,506	-	11,506	-	11,506
27	Reg. Comm. Exp. - Other	14,189	-	14,189	-	14,189
28	Reg. Comm. Exp. - Rate Case	74,200	-	74,200	-	74,200
29	Interest on Customer Deposits	-	-	5,346	-	5,346
30	Miscellaneous Expense	77,293	-	77,293	-	77,293
31	Bad Debt Expense	45,215	-	45,215	-	45,215
32	Depreciation and Amortization Expense	1,598,765	(13,337)	1,585,428	-	1,585,428
33	Property Taxes	576,026	(28,801)	547,225	(1,023)	546,202
34	Income Tax	1,013,153	40,600	1,053,753	(21,797)	1,031,956
35	Total Operating Expenses	\$ 8,489,987	\$ (66,255)	\$ 8,429,078	\$ (22,820)	\$ 8,406,258
36	Operating Income (Loss)	\$ 1,871,616	\$ 66,255	\$ 1,932,525	\$ (35,129)	\$ 1,897,396

References:

Column (A): Company Schedule C-1
Column (B): Schedule DWC-W17
Column (C): Column (A) + Column (B)
Column (D): Schedules DWC-WW23 and DWC-WW24
Column (E): Column (C) + Column (D)

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) Water Testing Expense ADJ #1	(C) Corporate Allocation True-Up ADJ #2	(D) Corporate Allocation Expense ADJ #3	(E) Interest on Customer Deposits ADJ #4	(F) Depreciation Expense ADJ #5	(G) Property Tax Expense ADJ #6	(H) Income Tax Expense ADJ #7	(I) STAFF ADJUSTED
1	REVENUES:									
2	Metered Water Sales	\$ 9,853,383								\$ 9,853,383
3	Water Sales-Umetered	-								-
4	Other Operating Revenue	508,220								508,220
5	Intentionally Left Blank	-								-
6	Total Operating Revenues	\$ 10,361,603								\$ 10,361,603
7	OPERATING EXPENSES:									
8	Salaries and Wages	\$ 1,168,151								\$ 1,168,151
9	Purchased Water	26,656								26,656
10	Purchased Power	601,635								601,635
11	Sludge Removal Expense	234,893	3,410							238,303
12	Chemicals	357,986								357,986
13	Materials and Supplies	86,994								86,994
14	Management Services - US Liberty Water	1,469,058		(8,420)	(23,978)					1,436,660
15	Management Services - Corporate	698,951								698,951
16	Outside Services - Accounting	2,161								2,161
17	Outside Services - Engineering	-								-
18	Outside Services - Legal	222,303								222,303
19	Outside Services- Other	25,746								25,746
20	Water Testing	57,735	(35,730)							22,005
21	Rents - Office	40,007								40,007
22	Equipment Rental	3,076								3,076
23	Transportation Expenses	26,465								26,465
24	Insurance - General Liability	57,823								57,823
25	Insurance - Vehicle	11,506								11,506
26	Reg. Comm. Exp. - Other	14,189								14,189
27	Reg. Comm. Exp. - Rate Case	74,200								74,200
28	Interest on Customer Deposits	-				5,346				5,346
29	Miscellaneous Expense	77,293								77,293
30	Bad Debt Expense	45,215								45,215
31	Depreciation and Amortization Expense	1,595,428					(13,337)			1,582,091
32	Property Taxes	547,225						(28,801)		518,424
33	Income Tax	1,053,753							40,600	1,094,353
34	Total Operating Expenses	\$ 8,489,987	(32,320)	(8,420)	(23,978)	5,346	(13,337)	(28,801)	40,600	\$ 8,428,078
35	Operating Income (Loss)	\$ 1,871,616	\$ 32,320	\$ 8,420	\$ 23,978	\$ (5,346)	\$ (13,337)	\$ 28,801	\$ (40,600)	\$ 1,932,524

Litchfield Park Service Company - Wastewater Division
Docket Nos. W-01428A-13-0043 and SW-01428A-13-0042
Test Year Ended: December 31, 2012

Schedule DWC-WW18

OPERATING INCOME ADJUSTMENT NO. 1 - WATER TESTING EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	Sludge Removal Expense	\$ 234,893	\$ 3,410	\$ 238,303
2				
3	Water Testing Expense	\$ 57,735	\$ (35,730)	\$ 22,005

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 2 - CORPORATE EXPENSE TRUE-UP

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	Management Services - US Liberty Water	\$ 1,469,058	\$ (8,420)	\$ 62,478

Staff's Calculation

Accrual Adjustment	\$ 29,297		
Allocated to Water	28.74%	\$ 8,420	
Allocated to Wastewater	26.87%	\$ 7,872	

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

Litchfield Park Service Company - Wastewater Division
Docket Nos. W-01428A-13-0043 and SW-01428A-13-0042
Test Year Ended: December 31, 2012

Schedule DWC-WW20

OPERATING INCOME ADJUSTMENT NO. 3 - CORPORATE ALLOCATION EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	Management Services - US Liberty Water	\$ 1,469,058	\$ (23,978)	\$ 62,478

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 4 - INTEREST ON CUSTOMER DEPOSITS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF ¹ RECOMMENDED
1	Interest on Customer Deposits	\$ -	\$ 5,346	\$ 5,346

Staff's Calculation

Allocated to Water	\$ 5,346
Allocated to Wastewater	5,931
Total	<u>\$ 11,277</u>

¹ Amounts may not reflect other adjustments.

REFERENCES:

Column [A]: Company Filing

Column [B]: Testimony DWC

Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 5 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A] PLANT In SERVICE Per Staff	[B] NonDepreciable or Fully Depreciated PLANT	[C] DEPRECIABLE PLANT (Col A - Col B)	[D] DEPRECIATION RATE	[E] DEPRECIATION EXPENSE (Col C x Col D)
1	351	Organization	\$ -	\$ 100	\$ (100)	0.00%	\$ -
2	352	Franchises	\$ -	\$ -	\$ -	0.00%	\$ -
3	353	Land and Land Rights	\$ 1,835,956	\$ 1,284,595	\$ 551,361	0.00%	\$ -
4	354	Structures and Improvements	\$ 23,768,875	\$ -	\$ 23,768,875	3.33%	\$ 791,504
5	355	Power Generation Equipment	\$ 602,932	\$ -	\$ 602,932	5.00%	\$ 30,147
6	360	Collection Services - Force	\$ 1,162,597	\$ -	\$ 1,162,597	2.00%	\$ 23,252
7	361	Collection Services - Gravity	\$ 31,928,244	\$ -	\$ 31,928,244	2.00%	\$ 638,565
8	362	Special Collecting Structures	\$ -	\$ -	\$ -	2.00%	\$ -
9	363	Services to Customers	\$ 76,190	\$ -	\$ 76,190	2.00%	\$ 1,524
10	364	Flow Measuring Devices	\$ 46,210	\$ -	\$ 46,210	10.00%	\$ 4,621
11	365	Flow Measuring Installations	\$ 36,618	\$ -	\$ 36,618	2.00%	\$ 732
12	366	Reuse Services	\$ 4,057,660	\$ -	\$ 4,057,660	2.00%	\$ 81,153
13	367	Reuse Meters and Installations	\$ 44,753	\$ -	\$ 44,753	8.33%	\$ 3,728
14	370	Receiving Wells	\$ 860,393	\$ -	\$ 860,393	3.33%	\$ 28,651
15	371	Effluent Pumping Equipment	\$ 861,151	\$ -	\$ 861,151	12.50%	\$ 107,644
16	374	Reuse Trans. And Dist. System	\$ 62,286	\$ -	\$ 62,286	2.50%	\$ 1,557
17	375	Resuse T&D	\$ 420,334	\$ -	\$ 420,334	2.50%	\$ 10,508
18	380	Treatment and Disposal Equipment	\$ 5,356,062	\$ -	\$ 5,356,062	5.00%	\$ 267,803
19	381	Plant Sewers	\$ 47,802	\$ -	\$ 47,802	5.00%	\$ 2,390
20	382	Outfall Sewer Lines	\$ 343,681	\$ -	\$ 343,681	3.33%	\$ 11,445
21	389	Other Plant & Misc. Equipment	\$ 827,629	\$ -	\$ 827,629	6.67%	\$ 55,203
22	390	Office Furniture & Equipment	\$ 275,740	\$ -	\$ 275,740	6.67%	\$ 18,392
23	391	Transportation Equipment	\$ 33,497	\$ -	\$ 33,497	20.00%	\$ 6,699
24	392	Stores Equipment	\$ 8,968	\$ -	\$ 8,968	4.00%	\$ 359
25	393	Tools, Shop & Garage Equipment	\$ 129,950	\$ -	\$ 129,950	5.00%	\$ 6,497
26	394	Labratory Equipment	\$ 187,184	\$ -	\$ 187,184	10.00%	\$ 18,718
27	395	Power Operated Equipment	\$ 6,605	\$ -	\$ 6,605	5.00%	\$ 330
28	396	Communication Equipment	\$ 415,441	\$ -	\$ 415,441	10.00%	\$ 41,544
29	398	Other Tangible Plant	\$ -	\$ -	\$ -	10.00%	\$ -
30		Total Plant	\$ 73,396,759	\$ 1,284,695	\$ 72,112,064		\$ 2,152,967
31							
32		Plus: Post Test Year Plant					
33	380	Treatment and Disposal Equipment	\$ 700,000	\$ -	\$ 700,000	5.00%	\$ -
37							
39		Less: Amortization of Contributions					
40	361	Collection Sewers Gravity	\$ 24,892,778			2.00%	\$ (497,856)
41	363	Customer Services	\$ 3,484,137			2.00%	\$ (69,683)
45			\$ 28,376,915				\$ (567,538)
46							
47		Total Depreciation Expense					\$ 1,585,428
48							
49		Depreciation Expense - Company					\$ 1,598,765
50							
51		Staff's Adjustment to Depreciation Expense					\$ (13,337)

References:

Column [A]: Schedule DWC-WW16
Column [B]: From Column [A]
Column [C]: Column [A] - Column [B]
Column [D]: Engineering Staff Report
Column [E]: Column [C] x Column [D]

OPERATING INCOME ADJUSTMENT NO. 6 - PROPERTY TAX EXPENSE

LINE NO.		[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Property Tax Calculation		
1	Staff Adjusted Test Year Revenues	\$ 10,361,603	\$ 10,361,603
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	20,723,206	\$ 20,723,206
4	Staff Recommended Revenue, Per Schedule DWC-W1	10,361,603	\$ 10,303,654
5	Subtotal (Line 4 + Line 5)	31,084,809	31,026,860
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	10,361,603	\$ 10,342,287
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	20,723,206	\$ 20,684,573
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	50,681	\$ 50,681
12	Full Cash Value (Line 9 + Line 10 - Line 11)	20,672,525	\$ 20,633,892
13	Assessment Ratio	19.0%	19.0%
14	Assessment Value (Line 12 * Line 13)	3,927,780	\$ 3,920,440
15	Composite Property Tax Rate (Per Company Schedule)	13.9322%	13.9322%
16			\$ -
17	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 547,225	
18	Company Proposed Property Tax	576,026	
19			
20	Staff Test Year Adjustment (Line 16-Line 17)	\$ (28,801)	
21	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 546,202
22	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 547,225
23	Increase in Property Tax Expense Due to Increase in Revenue Requirement		\$ (1,023)
24			
25	Increase to Property Tax Expense		\$ (1,023)
26	Increase in Revenue Requirement		(57,949)
27	Increase to Property Tax per Dollar Increase in Revenue (Line 19/Line 20)		1.764740%

OPERATING INCOME ADJUSTMENT NO. 7 - TEST YEAR INCOME TAXES

LINE NO.	DESCRIPTION	
1		
2		
3		
4	<i>Calculation of Income Tax:</i>	Test Year
5	Revenue (Schedule DWC-WW1)	\$ 10,361,603
6	Operating Expenses Excluding Income Taxes	\$ 7,375,325
7	Synchronized Interest (L17)	\$ 234,246
8	Arizona Taxable Income (L1 - L2 - L3)	\$ 2,752,031
9	Arizona State Income Tax Rate	6.5000%
10	Arizona Income Tax (L4 x L5)	\$ 178,882
11	Federal Taxable Income (L4 - L6)	\$ 2,573,149
12	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 7,500
13	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ 6,250
14	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ 8,500
15	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ 91,650
16	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ 760,971
17	Total Federal Income Tax	\$ 874,871
18	Combined Federal and State Income Tax (L44 + L51)	<u>\$ 1,053,753</u>
19		
20		
21	<i>Calculation of Interest Synchronization:</i>	
22	Rate Base (Schedule DWC-W4)	\$ 23,424,640
23	Weighted Average Cost of Debt	1.10%
24	Synchronized Interest (L16 x L17)	<u>\$ 257,671</u>
25		
26		
27		
28	Income Tax - Per Staff	\$ 1,053,753
28	Income Tax - Per Company	\$ 1,013,153
29	Staff Adjustment	<u>\$ 40,600</u>

ATTACHMENTS

DATA RESPONSES

REFERENCED

**LITCHFIELD PARK SERVICE COMPANY DBA LIBERTY UTILITIES
DOCKET NOS. W-01427A-13-0043 AND SW-01428A-13-0042
RESPONSE TO STAFF'S FIFTEENTH SET OF DATA REQUESTS**

August 7, 2013

Response provided by: Christopher D. Krygier
Title: Utility Rates and Regulatory Manager
Company: Litchfield Park Service Company dba Liberty Utilities
Address: 12725 W. Indian School Road, Suite D101
Avondale, AZ 85392

Company Response Number: JMM 15-1

Q. Capital Asset Additions – While reviewing the Company's plant invoices, Staff noted several invoices that were dated in 2006 and 2007, and posted to the Company's general ledger as additions in 2011. Please answer the following questions:

- a. Are these invoices double posted? If no please explain.
- b. Does the Company consider the presence of the late postings to reflect the possibility of internal control weaknesses?
- c. Did the Company's external auditor(s) issue a separate report on the Company's internal controls for 2011? If so please provide Staff with a copy of this report.

RESPONSE:

- a. No, the Company inadvertently omitted these invoices from its B-2 Schedules in the last rate case. The Company discovered a batch of invoices were not capitalized to utility plant in-service in the last rate case and therefore needed to be included in this rate case. As a consequence, the Company has not yet recovered a return on or off these investments.
- b. No, while the Company is always looking to improve processes and procedures, it does not have internal control weaknesses.

- c. Yes, at a minimum, the parent company's, Algonquin Power & Utilities Corporation, three most recent annual reports all contain statements by the KPMG, APUC's external auditors that the controls in place or the financial statements as presented are materially correct. The following are excerpts from the annual reports.

2012: Attached as "JMM 15-1(c) - (APUC Annual Report 2012)", KPMG states on page 71 "In our opinion, Algonquin Power & Utilities Corp. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission."

Two paragraphs later KPMG further elaborates "We also have audited, in accordance We also have audited, in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Algonquin Power & Utilities Corp. as of December 31, 2012 and December 31, 2011, and the related consolidated statements of operations, comprehensive income (loss), equity and cash flows for the years ended December 31, 2012 and December 31, 2011, and our report dated March 14, 2013 expressed an unqualified (unmodified) opinion on those consolidated financial statements."

2011: Furthermore, the 2011 Annual Report attached as "JMM 15-1 (c) - (APUC Annual Report 2011)" states on page 68 "In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of Algonquin Power & Utilities Corp. as at December 31, 2011 and December 31, 2010, and its consolidated results of operations and its consolidated cash flows for the years ended December 31, 2011 and December 31, 2010 in accordance with U.S. generally accepted accounting principles."

2010: Finally, "JMM 15-1(c) - (APUC Annual Report 2010)" contains the 2010 Annual Report: "In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of Algonquin Power & Utilities Corp. as at December 31, 2010 and 2009 and the consolidated results of its operations and its consolidated cash flows for the two years then ended in accordance with Canadian generally accepted accounting principles."

BEFORE THE ARIZONA CORPORATION COMMISSION

BOB STUMP

Chairman

GARY PIERCE

Commissioner

BRENDA BURNS

Commissioner

SUSAN BITTER SMITH

Commissioner

BOB BURNS

Commissioner

IN THE MATTER OF THE APPLICATION OF)
LITCHFIELD PARK SERVICE COMPANY,)
AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE FAIR VALUE)
OF ITS UTILITY PLANTS AND PROPERTY)
AND FOR INCREASES IN ITS WASTEWATER)
RATES AND CHARGES FOR UTILITY)
SERVICE BASED THEREON.)

DOCKET NO. SW-01428A-13-0042

IN THE MATTER OF THE APPLICATION OF)
LITCHFIELD PARK SERVICE COMPANY,)
AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE FAIR VALUE)
OF ITS UTILITY PLANTS AND PROPERTY)
AND FOR INCREASES IN ITS WATER RATES)
AND CHARGES FOR UTILITY SERVICE)
BASED THEREON.)

DOCKET NO. W-01427A-13-0043

DIRECT

TESTIMONY

OF

JOHN A. CASSIDY

PUBLIC UTILITIES ANALYST

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

SEPTEMBER 26, 2013

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**EXECUTIVE SUMMARY
LITCHFIELD PARK SERVICE COMPANY
DOCKET NOS. SW-01428A-13-0042, ET AL.**

The direct testimony of Staff witness John A. Cassidy addresses the following issues:

Capital Structure – Staff recommends that the Commission adopt a capital structure for Litchfield Park Service Company (“Company”) for this proceeding consisting of 15.9 percent debt and 84.1 percent equity.

Cost of Equity – Staff recommends that the Commission adopt an 8.4 percent return on equity (“ROE”) for the Company. Staff’s estimated ROE for the Company is based on the 8.4 percent average of its discounted cash flow method (“DCF”) and capital asset pricing model (“CAPM”) cost of equity methodology estimates for the sample companies of 8.7 percent for the DCF and 8.1 percent for the CAPM. Staff’s recommended ROE includes an upward economic assessment adjustment of 60 basis points, and a downward financial risk adjustment of 60 basis points.

Cost of Debt – Staff recommends that the Commission adopt a 6.4 percent cost of debt for the Company.

Overall Rate of Return – Staff recommends that the Commission adopt an 8.1 percent overall rate of return.

Mr. Bourassa’s Testimony – The Commission should reject the Company’s proposed 10.0 percent ROE for the following reasons:

Mr. Bourassa’s primary Future Growth DCF estimates rely exclusively on analysts’ forecasts of earnings per share growth; effectively, Mr. Bourassa’s overall DCF estimate is weighted 75 percent by his Future Growth DCF estimates. Mr. Bourassa’s historical dividend growth estimate in his Past and Future Growth DCF model is inflated through the use of growth in average annual share price as a proxy to estimate dividend growth. In both DCF models, Mr. Bourassa overstates the current dividend yield (D_0/P_0) by using a 12-month average stock price value for (P_0). Mr. Bourassa’s CAPM estimates are inflated due to use of a forecasted risk-free rate.

I. INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is John A. Cassidy. I am a Public Utilities Analyst employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Briefly describe your responsibilities as a Public Utilities Analyst.

A. I am responsible for the examination of financial and statistical information included in utility rate applications and other financial matters, including studies to estimate the cost of capital component in rate filings used to determine the overall revenue requirement, and for preparing written reports, testimonies and schedules to present Staff's recommendations to the Commission on these matters.

Q. Please describe your educational background and professional experience.

A. I hold a Bachelor of Arts degree in History from Arizona State University, a Master of Library Science degree from the University of Arizona, and a Master of Business Administration degree with an emphasis in Finance from Arizona State University. While pursuing my MBA degree, I was inducted into Beta Gamma Sigma, the National Business Honor Society. I have passed the CPA exam, but opted not to pursue certification. I have worked professionally as a librarian, financial consultant and tax auditor and served as Staff's cost of capital witness in rate case evidentiary proceedings in my current as well as in a past tenure as a Commission employee.

Q. What is the scope of your testimony in this case?

A. My testimony provides Staff's recommended capital structure, return on equity ("ROE") and overall rate of return ("ROR") for establishing the revenue requirements for Litchfield

1 Park Service Company ("LPSCO" or "Company") pending water and wastewater
2 applications.

3
4 **Q. Please provide a brief description of LPSCO.**

5 A. LPSCO is an Arizona public service corporation engaged in providing water and
6 wastewater utility services in portions of Maricopa County, Arizona, pursuant to
7 certificates of convenience and necessity granted by the Commission. During the test
8 year, LPSCO served approximately 16,800 water and 16,160 sewer service connections.

9
10 **Summary of Testimony and Recommendations**

11 **Q. Briefly summarize how Staff's cost of capital testimony is organized.**

12 A. Staff's cost of capital testimony is presented in eleven sections. Section I is this
13 introduction. Section II discusses the concept of weighted average cost of capital
14 ("WACC"). Section III presents the concept of capital structure and presents Staff's
15 recommended capital structure for LPSCO in this proceeding. Section IV presents Staff's
16 cost of debt for LPSCO. Section V discusses the concepts of ROE and risk. Section VI
17 presents the methods employed by Staff to estimate LPSCO's ROE. Section VII presents
18 the findings of Staff's ROE analysis. Section VIII presents Staff's final cost of equity
19 estimates for LPSCO. Section IX presents Staff's ROR recommendation. Section X
20 presents Staff's comments on the direct testimony of the Company's witness, Mr. Thomas
21 J. Bourassa. Finally, section XI presents the conclusions.

22
23 **Q. Have you prepared any schedules to accompany your testimony?**

24 A. Yes. I prepared nine schedules (JAC-1 to JAC-9) which support Staff's cost of capital
25 analysis.

1 **Q. What is Staff's recommended rate of return for LPSCO?**

2 A. Staff recommends an 8.1 percent overall ROR, as shown in Schedule JAC-1. Staff's ROR
3 recommendation is based on cost of equity estimates for the sample companies of 8.7
4 percent from the discounted cash flow ("DCF") method and 8.1 percent from the capital
5 asset pricing model ("CAPM"). Staff recommends adoption of a 60 basis point upward
6 economic assessment adjustment and a 60 basis point downward financial risk adjustment,
7 resulting in an 8.1 percent overall ROR.

8
9 **LPSCO's Proposed Overall Rate of Return**

10 **Q. Briefly summarize LPSCO's proposed capital structure, cost of debt, ROE and**
11 **overall ROR for this proceeding.**

12 A. Table 1 summarizes the Company's proposed capital structure, cost of debt, ROE and
13 overall ROR in this proceeding:

14
15 **Table 1**

	Weight	Cost	Weighted Cost
Long-term Debt	15.87%	6.86%	1.09%
Common Equity	84.13%	10.0%	8.41%
Cost of Capital/ROR			9.50%

16
17 LPSCO is proposing an overall rate of return of 9.50 percent.

18
19 **II. THE WEIGHTED AVERAGE COST OF CAPITAL**

20 **Q. Briefly explain the cost of capital concept.**

21 A. The cost of capital is the opportunity cost of choosing one investment over others with
22 equivalent risk. In other words, the cost of capital is the return that investors expect for

1 investing their financial resources in a determined business venture over another business
2 venture.

3
4 **Q. What is the overall cost of capital?**

5 A. The cost of capital to a company issuing a variety of securities (i.e., stock and
6 indebtedness) is an average of the cost rates on all issued securities adjusted to reflect the
7 relative amounts for each security in the company's entire capital structure. Thus, the
8 overall cost of capital is the Weighted Average Cost of Capital ("WACC").

9
10 **Q. How is the WACC calculated?**

11 A. The WACC is calculated by adding the weighted expected returns of a firm's securities.
12 The WACC formula is:

13 Equation 1.

14
15
$$WACC = \sum_{i=1}^n W_i * r_i$$

16

17 In this equation, W_i is the weight given to the i^{th} security (the proportion of the i^{th} security
18 relative to the portfolio) and r_i is the expected return on the i^{th} security.

1 **Q. Can you provide an example demonstrating application of Equation 1?**

2 A. Yes. For this example, assume that an entity has a capital structure composed of 60
3 percent debt and 40 percent equity. Also, assume that the embedded cost of debt is 6.0
4 percent and the expected return on equity, i.e., the cost of equity, is 10.5 percent.
5 Calculation of the WACC is as follows:

6
$$\text{WACC} = (60\% * 6.0\%) + (40\% * 10.5\%)$$

7
$$\text{WACC} = 3.60\% + 4.20\%$$

8
$$\text{WACC} = 7.80\%$$

9
10 The weighted average cost of capital in this example is 7.80 percent. The entity in this
11 example would need to earn an overall rate of return of 7.80 percent to cover its cost of
12 capital.

13
14 **III. CAPITAL STRUCTURE**

15 **Background**

16 **Q. Please explain the capital structure concept.**

17 A. The capital structure of a firm is the relative proportions of each type of security:--short-
18 term debt, long-term debt (including capital leases), preferred stock and common stock--
19 that are used to finance the firm's assets.

20
21 **Q. How is the capital structure expressed?**

22 A. The capital structure of a company is expressed as the percentage of each component of
23 the capital structure (capital leases, short-term debt, long-term debt, preferred stock and
24 common stock) relative to the entire capital structure.

As an example, the capital structure for an entity that is financed by \$20,000 of short-term debt, \$85,000 of long-term debt (including capital leases), \$15,000 of preferred stock and \$80,000 of common stock is shown in Table 2.

Table 2

Component			%
Short-Term Debt	\$20,000	(\$20,000/\$200,000)	10.0%
Long-Term Debt	\$85,000	(\$85,000/\$200,000)	42.5%
Preferred Stock	\$15,000	(\$15,000/\$200,000)	7.5%
Common Stock	\$80,000	(\$80,000/\$200,000)	40.0%
Total	\$200,000		100%

The capital structure in this example is composed of 10.0 percent short-term debt, 42.5 percent long-term debt, 7.5 percent preferred stock and 40.0 percent common stock.

LPSCO's Capital Structure

Q. What capital structure does LPSCO propose?

A. The Company proposes a capital structure composed of 15.87 percent debt and 84.13 percent common equity. LPSCO's proposed capital structure reflects the Company's actual capital structure as of the December 31, 2012 test-year end.

1 **Q. How does LPSCO's proposed capital structure compare to the capital structures of**
2 **publicly-traded water utilities?**

3 A. Schedule JAC-4 shows the capital structures of seven publicly-traded water companies
4 ("sample water companies" or "sample water utilities") as of December 2012. The
5 average capital structure for the sample water utilities is comprised of approximately 50.3
6 percent debt and 49.7 percent equity.

7
8 **Staff's Capital Structure**

9 **Q. What is Staff's recommended capital structure for LPSCO?**

10 A. Staff recommends a capital structure composed of 15.9 percent debt and 84.1 percent
11 equity. Staff's recommended capital structure reflects the Company's actual capital
12 structure as of the December 31, 2012, test-year end.¹

13
14 **IV. COST OF DEBT**

15 **Q. What is the cost of debt proposed by the Company in this proceeding?**

16 A. LPSCO proposes a cost of debt of 6.86 percent. This figure represents the weighted
17 average cost of LPSCO's outstanding Industrial Development Authority ("IDA") debt
18 based upon an effective interest rate of 6.68 percent for its Series 1999 IDA bonds and
19 6.95 percent for its Series 2001 IDA bonds, as shown in the Company's Schedule D-2.

20
21 **Q. What cost of debt does Staff recommend for LPSCO in this proceeding?**

22 A. Staff recommends a cost of debt of 6.4 percent. This figure represents the weighted
23 average cost of the Company's outstanding debt based upon a blended 5.87 percent
24 interest rate payable semiannually on LPSCO's outstanding Series 1999 IDA bonds and a
25 blended 6.71 percent interest rate payable semiannually on LPSCO's outstanding Series

¹ Staff's recommended capital structure is the same as that proposed by the Company; however, LPSCO carries its percentage figures out two digits (i.e., hundredths), while Staff carries its percentages out to one digit (i.e., tenths).

1 2001 IDA bonds. Staff obtained these interest rate cost figures from the Company's
2 audited financial statements for the years ended December 31, 2011 and 2012, which were
3 obtained in response to a data request issued by Staff.²
4

5 **Q. Does information reported in the 2012 Annual Reports filed by LPSCO for its water**
6 **and wastewater operations serve to affirm Staff's recommended cost of debt in this**
7 **proceeding?**

8 A. Yes. Each of LPSCO's two 2012 Annual Reports (i.e., one water, one sewer) filed with
9 the Commission affirm the cost of debt recommended by Staff in this proceeding.
10 Specifically, in a chart entitled, "Supplemental Financial Data," in the Annual Reports,
11 LPSCO provides detailed information on its long-term debt, and reports the interest rate
12 on its Series 1999 IDA Bonds as 5.88 percent, and the interest rate on its Series 2001 IDA
13 Bonds as 6.70 percent. Based on other information included in the chart, these interest
14 rates equate to a weighted average cost of debt for LPSCO of 6.43 percent.³ Furthermore,
15 when calculated using the interest expense and long-term debt (including current
16 maturities) balances reported in the financial statements included in the Annual Reports,
17 LPSCO's weighted average cost of debt is shown to be 6.38 percent in the 2012 test-year.⁴
18 Thus, the figures reported by LPSCO in its 2012 Annual Reports serve to affirm Staff's
19 overall 6.4 percent cost of debt for the Company.
20

² Staff Data Request JAC-17.4. As stated in the notes (Note 6) to the financial statements, the carrying value of the 1999 Bonds and the 2001 Bonds have been reduced by bond issuance costs; thus, the blended 5.87% rate for the 1999 Bonds and the blended 6.71% rate for the 2001 Bonds represent the effective interest rate for each series of IDA bonds.

³ The Supplemental Financial Data chart indicates that LPSCO had total IDA debt outstanding of \$10,742,090 (\$3,690,489 + \$7,051,601) as of December 31, 2012, and reported current year interest of \$690,708 (\$214,053 + \$476,655). Based on these figures, LPSCO's weighted average cost of debt is 6.43% (\$690,708/\$10,742,090).

⁴ LPSCO reported total interest expense of \$665,261 in 2012 (\$349,841 + \$315,420), and total long-term debt outstanding of \$10,420,000 (\$5,321,804 + \$157,761 + \$4,798,196 + \$142,239) as of December 31, 2012. This equates to a weighted average cost of debt of 6.38% (\$665,261/\$10,420,000).

1 **Q. Is there other evidence with which to affirm Staff's recommended 6.4 percent cost of**
2 **debt in this proceeding?**

3 A. Yes. In its previous rate filing,⁵ LPSCO proposed a weighted average cost of debt of 6.39
4 percent, based upon a reported effective interest rate of 5.88 percent on its Series 1999
5 IDA Bonds and 6.70 percent on its Series 2001 IDA Bonds.⁶ As in this docket, the long-
6 term debt component of LPSCO's capital structure in the prior docket consisted
7 exclusively of the same Series 1999 IDA Bonds and Series 2001 IDA Bonds comprising
8 the debt component of the capital structure in this proceeding.⁷

9
10 **Q. In the prior rate docket, what cost of debt did Staff recommend for LPSCO, and**
11 **what cost of debt was authorized by the Commission?**

12 A. In LPSCO's prior rate docket, Staff recommended a cost of debt of 6.4 percent, and the
13 Commission authorized a cost of debt of 6.39 percent.⁸

14
15 **V. RETURN ON EQUITY**

16 **Background**

17 **Q. Please define the term "cost of equity capital."**

18 A. The cost of equity is the rate of return that investors expect to earn on their investment in a
19 business entity given its risk. In other words, the cost of equity to the entity is the
20 investors' expected rate of return on other investments of similar risk. As investors have a
21 wide selection of stocks to choose from, they will choose stocks with similar risks but
22 higher returns. Therefore, the market determines the entity's cost of equity.

23

⁵ Docket No. SW-01428A-09-0103, et al.

⁶ See Docket No. SW-01428A-09-0103, et al., Schedule D-2.

⁷ As shown in Schedule D-2 filed in the prior rate docket, LPSCO employed a test year end of September 30, 2008; as of that date, LPSCO had total long-term debt outstanding of \$11,506,844, consisting of \$4,283,875 in Series 1999 IDA Bonds and \$7,222,969 in Series 2001 IDA Bonds.

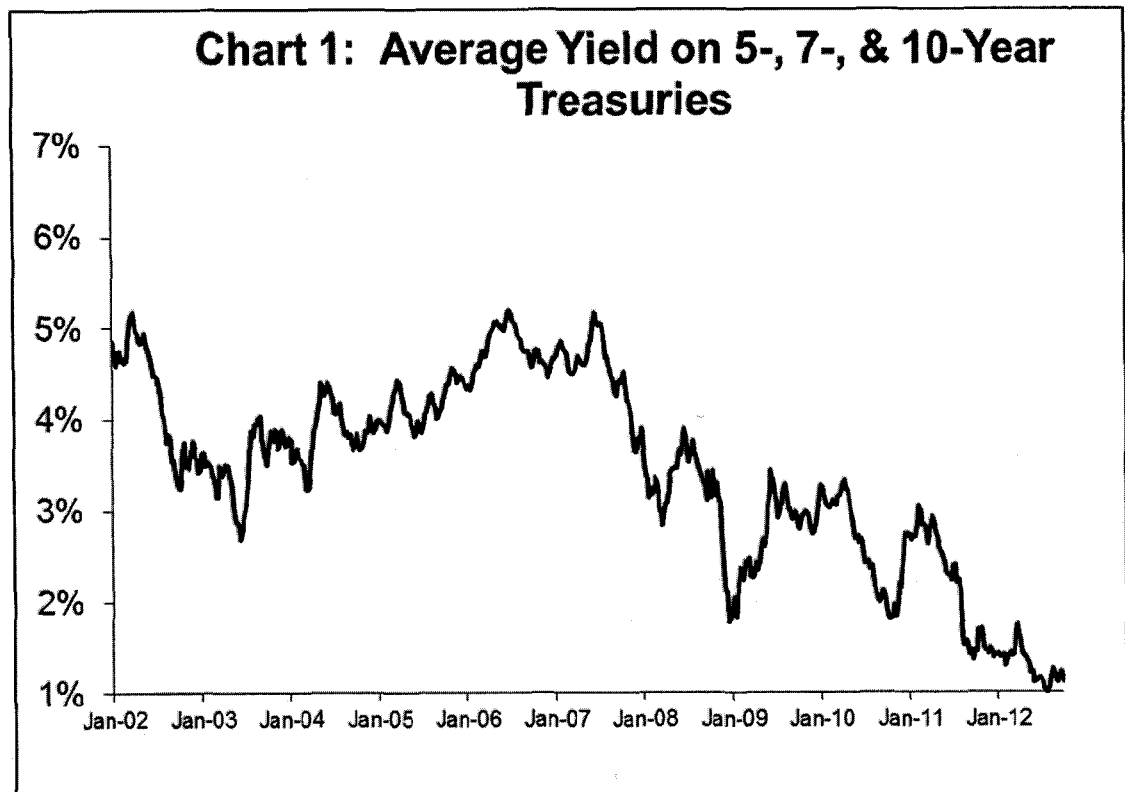
⁸ See Decision No. 72026, p. 55, lines 15-18

1 **Q. Is there a correlation between interest rates and the cost of equity?**

2 A. Yes, there is a positive correlation between interest rates and the cost of equity, as the two
3 tend to move in the same direction. This relationship is reflected in the CAPM formula.
4 The CAPM is a market-based model employed by Staff for estimating the cost of equity.
5 The CAPM is further discussed in Section VI of this testimony.

6
7 **Q. What has been the general trend of interest rates in recent years?**

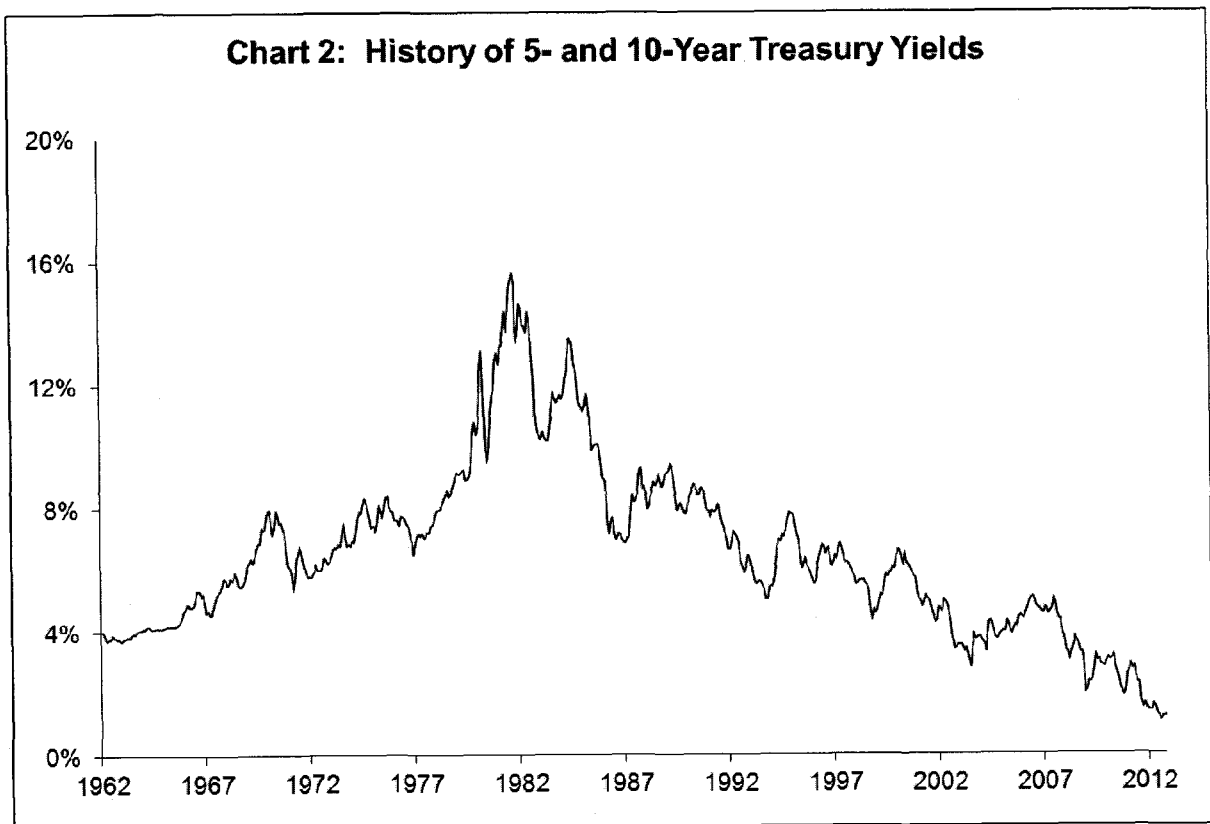
8 A. A chronological chart of interest rates is a good tool to show interest rate history and
9 identify trends. Chart 1 graphs intermediate U.S. treasury rates from January 4, 2002, to
10 May 31, 2013.



As shown in Chart 1, intermediate-term interest rates trended downward from 2002 to mid-2003, trended upward through mid-2007, and have generally trended downward since that time.

Q. What has been the general trend in interest rates longer term?

A. U.S. Treasury rates from January 1962- May 2013 are shown in Chart 2. The chart shows that interest rates trended upward through the mid-1980s and have trended downward since that time.



Source: Federal Reserve

1 **Q. Do these trends suggest anything in terms of cost of equity?**

2 A. Yes. As previously noted, interest rates and the cost of equity tend to move in the same
3 direction; therefore, the cost of equity has declined over the past 25 years.
4

5 **Q. Do actual returns represent the cost of equity?**

6 A. No. The cost of equity represents investors' *expected* returns and not realized returns.
7

8 **Q. Is there any information available that leads to an understanding of the relationship**
9 **between the equity returns required for a regulated water utility and those required**
10 **in the market as a whole?**

11 A. Yes. A comparison of betas, a component of the CAPM discussed in Section VI, for the
12 water utility industry and the market provide insight into this relationship. In theory, the
13 market has a beta value of 1.0, with stocks bearing greater risk (less risk) than the market
14 having beta values higher than (lower than) 1.0, respectively. Furthermore, in accordance
15 with the CAPM, the cost of equity capital moves in the same direction as beta. Therefore,
16 because the average beta value (0.71)⁹ for a water utility is less than 1.0, the required
17 return on equity for a regulated water utility is below that of the market as a whole.
18

19 **Risk**

20 **Q. Please define risk in relation to cost of capital.**

21 A. Risk, as it relates to an investment, is the variability or uncertainty of the returns on a
22 particular security. Investors are risk averse and require a greater potential return to invest
23 in relatively greater risk opportunities, i.e., investors require compensation for taking
24 on additional risk. Risk is generally separated into two components. Those components

⁹ See Schedule JAC-7.

1 are market risk (systematic risk) and non-market risk (diversifiable risk or firm-specific
2 risk).

3
4 **Q. What is market risk?**

5 A. Market risk or systematic risk is the risk of an investment that cannot be reduced through
6 diversification. Market risk stems from factors that affect all securities, such as
7 recessions, war, inflation and high interest rates. Since these factors affect the entire
8 market they cannot be eliminated through diversification. Market risk does not impact
9 each security to the same degree. The degree to which a given security's return is affected
10 by market fluctuations can be measured using Beta. Beta reflects the business risk and the
11 financial risk of a security.

12
13 **Q. Please define business risk.**

14 A. Business risk is the fluctuation of earnings inherent in a firm's operations and
15 environment, such as competition and adverse economic conditions that may impair its
16 ability to provide returns on investment. Companies in the same or similar line of
17 business tend to experience the same fluctuations in business cycles.

18
19 **Q. Please define financial risk.**

20 A. Financial risk is the fluctuation of earnings inherent in the use of debt financing that may
21 impair a firm's ability to provide adequate returns; the higher the percentage of debt in a
22 company's capital structure, the greater its exposure to financial risk.

23
24 **Q. Do business risk and financial risk affect the cost of equity?**

25 A. Yes.

1 **Q. Is a firm subject to any other risk?**

2 A. Yes. Firms are also subject to unsystematic or firm-specific risk. Examples of
3 unsystematic risk include losses caused by labor problems, nationalization of assets, loss
4 of a big client or weather conditions. Investors can eliminate firm-specific risk by holding
5 a diverse portfolio; thus, it is not of concern to diversified investors.

6
7 **Q. How does LPSCO's financial risk exposure compare to that of Staff's sample group**
8 **of water companies?**

9 A. JAC-4 shows the capital structures of the seven sample water companies as of December
10 2012, and LPSCO's adjusted capital structure as of the December 31, 2012 test year end.
11 As shown, the sample water utilities were capitalized with approximately 50.3 percent
12 debt and 49.7 percent equity, while LPSCO's capital structure consists of 15.9 percent
13 debt and 84.1 percent equity. Thus, compared to Staff's sample companies, LPSCO has
14 significantly less exposure to financial risk.

15
16 **Q. Is firm-specific risk measured by beta?**

17 A. No. Firm-specific risk is not measured by beta.

18
19 **Q. Is the cost of equity affected by firm-specific risk?**

20 A. No. Since firm-specific risk can be eliminated through diversification, it does not affect
21 the cost of equity.

22
23 **Q. Should investors expect additional returns for firm-specific risk?**

24 A. No. Investors who hold diversified portfolios can eliminate firm-specific risk and,
25 consequently, do not require any additional return. Since investors who choose to be less

1 than fully-diversified must compete in the market with fully-diversified investors, the
2 former cannot expect to be compensated for unique risk.

3 4 **VI. ESTIMATING THE COST OF EQUITY**

5 **Introduction**

6 **Q. Did Staff directly estimate the cost of equity for LPSCO?**

7 A. No. Since LPSCO is not a publicly-traded company, Staff is unable to directly estimate its
8 cost of equity due to the lack of firm-specific market data. Instead, Staff estimated the
9 Company's cost of equity indirectly, using a representative sample group of publicly
10 traded water utilities as a proxy, taking the average of the sample group to reduce the
11 sample error resulting from random fluctuations in the market at the time the information
12 is gathered.

13
14 **Q. What companies did Staff select as proxies or comparables for LPSCO?**

15 A. Staff's sample consists of the following seven publicly-traded water utilities: American
16 States Water, California Water, Aqua America, Connecticut Water Service, Middlesex
17 Water, SJW Corporation and York Water. Staff selected these companies because they
18 are publicly-traded and receive the majority of their earnings from regulated operations.

19
20 **Q. What models did Staff implement to estimate LPSCO's cost of equity?**

21 A. Staff used two market-based models to estimate the cost of equity for LPSCO: the DCF
22 model and the CAPM.

23

1 **Q. Please explain why Staff chose the DCF and CAPM models.**

2 A. Staff chose to use the DCF and CAPM models because they are widely-recognized
3 market-based models and have been used extensively to estimate the cost of equity. An
4 explanation of the DCF and CAPM models follows.

5
6 **Discounted Cash Flow Model Analysis**

7 **Q. Please provide a brief summary of the theory upon which the DCF method of**
8 **estimating the cost of equity is based.**

9 A. The DCF method of stock valuation is based on the theory that the value of an investment
10 is equal to the sum of the future cash flows generated from the aforementioned investment
11 discounted to the present time. This method uses expected dividends, market price and
12 dividend growth rate to calculate the cost of capital. Professor Myron Gordon pioneered
13 the DCF method in the 1960s. The DCF method has become widely used to estimate the
14 cost of equity for public utilities due to its theoretical merit and its simplicity. Staff used
15 the financial information for the relevant seven sample companies in the DCF model and
16 averaged the results to determine an estimated cost of equity for the sample companies.

17
18 **Q. Does Staff use more than one version of the DCF?**

19 A. Yes. Staff uses two versions of the DCF model: the constant-growth DCF and the multi-
20 stage or non-constant growth DCF. The constant-growth DCF assumes that an entity's
21 dividends will grow indefinitely at the same rate. The multi-stage growth DCF model
22 assumes the dividend growth rate will change at some point in the future.

23

The Constant-Growth DCF

Q. What is the mathematical formula used in Staff's constant-growth DCF analysis?

A. The constant-growth DCF formula used in Staff's analysis is:

Equation 2 :

$$K = \frac{D_1}{P_0} + g$$

where : K = the cost of equity
 D_1 = the expected annual dividend
 P_0 = the current stock price
 g = the expected infinite annual growth rate of dividends

Equation 2 assumes that the entity has a constant earnings retention rate and that its earnings are expected to grow at a constant rate. According to Equation 2, a stock with a current market price of \$10 per share, an expected annual dividend of \$0.45 per share and an expected dividend growth rate of 3.0 percent per year has a cost of equity to the entity of 7.5 percent reflected by the sum of the dividend yield ($\$0.45 / \$10 = 4.5$ percent) and the 3.0 percent annual dividend growth rate.

Q. How did Staff calculate the expected dividend yield (D_1/P_0) component of the constant-growth DCF formula?

A. Staff calculated the expected yield component of the DCF formula by dividing the expected annual dividend (D_1) by the spot stock price (P_0) after the close of market on August 28, 2013, as reported by *MSN Money*.

1 **Q. Why did Staff use the August 28, 2013, spot price rather than a historical average**
2 **stock price to calculate the dividend yield component of the DCF formula?**

3 A. The current, rather than historic, market price is used in order to be consistent with
4 financial theory. In accordance with the Efficient Market Hypothesis, the current stock
5 price is reflective of all available information on a stock, and as such reveals investors'
6 expectations of future returns. Use of historical average stock prices illogically discounts
7 the most recent information in favor of less recent information. The latter is stale and is
8 representative of underlying conditions that may have changed.

9
10 **Q. How did Staff estimate the dividend growth (g) component of the constant-growth**
11 **DCF model represented by Equation 2?**

12 A. The dividend growth component used by Staff is determined by the average of six
13 different estimation methods, as shown in Schedule JAC-8. Staff calculated historical and
14 projected growth estimates on dividend-per-share ("DPS"),¹⁰ earnings-per-share ("EPS")¹¹
15 and sustainable growth bases.

16
17 **Q. Why did Staff examine EPS growth to estimate the dividend growth component of**
18 **the constant-growth DCF model?**

19 A. Historic and projected EPS growth are used because dividends are related to earnings.
20 Dividend distributions may exceed earnings in the short run, but cannot continue
21 indefinitely. In the long term, dividend distributions are dependent on earnings.

¹⁰ Derived from information provided by *Value Line*.

¹¹ Derived from information provided by *Value Line*.

1 **Q. How did Staff estimate historical DPS growth?**

2 A. Staff estimated historical DPS growth by calculating a compound annual DPS growth rate
3 for each of its sample companies over the 10-year period, 2002-2012. As shown in
4 Schedule JAC-5, the average historical DPS growth rate for the sample was 3.6 percent.

5
6 **Q. How did Staff estimate projected DPS growth?**

7 A. Staff calculated an average of the projected DPS growth rates for the sample water utilities
8 from *Value Line* through the period, 2016-2018. The average projected DPS growth rate
9 is 5.2 percent, as shown in Schedule JAC-5.

10
11 **Q. How did Staff estimate historical EPS growth rate?**

12 Staff estimated historical EPS growth by calculating a compound annual EPS growth rate
13 for each of its sample companies over the 10-year period, 2002-2012. As shown in
14 Schedule JAC-5, the average historical EPS growth rate for the sample was 5.1 percent.

15
16 **Q. How did Staff estimate projected EPS growth?**

17 A. Staff calculated an average of the projected EPS growth rates for the sample water utilities
18 from *Value Line* through the period, 2016-2018. The average projected EPS growth rate
19 is 4.8 percent, as shown in Schedule JAC-5.

20
21 **Q. How does Staff calculate its historical and projected sustainable growth rates?**

22 A. Historical and projected sustainable growth rates are calculated by adding their respective
23 retention growth rate terms (br) to their respective stock financing growth rate terms (vs),
24 as shown in Schedule JAC-6.

1 **Q. What is retention growth?**

2 A. Retention growth is the growth in dividends due to the retention of earnings. The
3 retention growth concept is based on the theory that dividend growth cannot be achieved
4 unless the company retains and reinvests some of its earnings. The retention growth is
5 used in Staff's calculation of sustainable growth shown in Schedule JAC-6.

6
7 **Q. What is the formula for the retention growth rate?**

8 A. The retention growth rate is the product of the retention ratio and the book/accounting
9 return on equity. The retention growth rate formula is:

10 Equation 3:

$$\text{Retention Growth Rate} = br$$

where : b = the retention ratio (1 – dividend payout ratio)
 r = the accounting/book return on common equity

11
12 **Q. How did Staff calculate the average historical retention growth rate (br) for the**
13 **sample water utilities?**

14 A. Staff calculated the mean of the 10-year average historical retention rate for each sample
15 company over the period, 2002-2012. As shown in Schedule JAC-6, the historical
16 average retention (br) growth rate for the sample is 2.7 percent.

17
18 **Q. How did Staff estimate its projected retention growth rate (br) for the sample water**
19 **utilities?**

20 A. Staff used the retention growth projections for the sample water utilities for the period,
21 2016-2018, from *Value Line*. As shown in Schedule JAC-6, the projected average
22 retention growth rate for the sample companies is 3.6 percent.

1 **Q. When can retention growth provide a reasonable estimate of future dividend**
2 **growth?**

3 A. The retention growth rate is a reasonable estimate of future dividend growth when the
4 retention ratio is reasonably constant and the entity's market price to book value ("market-
5 to-book ratio") is expected to be 1.0. The average retention ratio has been reasonably
6 constant in recent years. However, the market-to-book ratio for the sample water utilities
7 is 2.2, notably higher than 1.0, as shown in Schedule JAC-7.

8
9 **Q. Is there any financial implication of a market-to-book ratio greater than 1.0?**

10 A. Yes. A market-to-book ratio greater than 1.0 implies that investors expect an entity to
11 earn an accounting/book return on its equity that exceeds its cost of equity. The
12 relationship between required returns and expected cash flows is readily observed in the
13 fixed securities market. For example, assume an entity contemplating issuance of bonds
14 with a face value of \$10 million at either 6 percent or 8 percent and, thus, paying annual
15 interest of \$600,000 or \$800,000, respectively. Regardless of investors' required return on
16 similar bonds, investors will be willing to pay more for the bonds if issued at 8 percent
17 than if the bonds are issued at 6 percent. For example, if the current interest rate required
18 by investors is 6 percent, then they would bid \$10 million for the 6 percent bonds and
19 more than \$10 million for the 8 percent bonds. Similarly, if equity investors require a 9
20 percent return and expect an entity to earn accounting/book returns of 13 percent, the
21 market will bid up the price of the entity's stock to provide the required return of 9
22 percent.

1 **Q. How has Staff generally recognized a market-to-book ratio exceeding 1.0 in its cost of**
2 **equity analyses in recent years?**

3 A. Staff has assumed that investors expect the market-to-book ratio to remain greater than
4 1.0. Given that assumption, Staff has added a stock financing growth rate (vs) term to the
5 retention ratio (br) term to calculate its historical and projected sustainable growth rates.
6

7 **Q. Do the historical and projected sustainable growth rates Staff uses to develop its**
8 **DCF cost of equity in this case continue to include a stock financing growth rate**
9 **term?**

10 A. Yes.
11

12 **Q. What is stock financing growth?**

13 A. Stock financing growth is the growth in an entity's dividends due to the sale of stock by
14 that entity. Stock financing growth is a concept derived by Myron Gordon and discussed
15 in his book *The Cost of Capital to a Public Utility*.¹² Stock financing growth is the
16 product of the fraction of the funds raised from the sale of stock that accrues to existing
17 shareholders (v) and the fraction resulting from dividing the funds raised from the sale of
18 stock by the existing common equity (s).
19

¹² Gordon, Myron J. *The Cost of Capital to a Public Utility*. MSU Public Utilities Studies, Michigan, 1974. pp 31-35.

1 **Q. What is the mathematical formula for the stock financing growth rate?**

2 A. The mathematical formula for stock financing growth is:

Equation 4:

$$\text{Stock Financing Growth} = vs$$

where: v = Fraction of the funds raised from the sale of stock that accrues
to existing shareholders
 s = Funds raised from the sale of stock as a fraction of the existing
common equity

3

4 **Q. How is the variable v presented above calculated?**

5 A. Variable v is calculated as follows:

Equation 5:

$$v = 1 - \left(\frac{\text{book value}}{\text{market value}} \right)$$

6

7 For example, assume that a share of stock has a \$30 book value and is selling for \$45.
8 Then, to find the value of v , the formula is applied:

$$v = 1 - \left(\frac{30}{45} \right)$$

9

In this example, v is equal to 0.33.

10

11 **Q. How is the variable s presented above calculated?**

12 A. Variable s is calculated as follows:

13 Equation 6:

14

15

$$s = \frac{\text{Funds raised from the issuance of stock}}{\text{Total existing common equity before the issuance}}$$

1 For example, assume that an entity has \$150 in existing equity, and it sells \$30 of stock.
2 Then, to find the value of s , the formula is applied:

$$s = \left(\frac{30}{150} \right)$$

3 In this example, s is equal to 20.0 percent.
4

5 **Q. What is the vs term when the market-to-book ratio is equal to 1.0?**

6 A. A market-to-book ratio of 1.0 reflects that investors expect an entity to earn a
7 book/accounting return on their equity investment equal to the cost of equity. When the
8 market-to-book ratio is equal to 1.0, none of the funds raised from the sale of stock by the
9 entity accrues to the benefit of existing shareholders, i.e., the term v is equal to zero (0.0).
10 Consequently, the vs term is also equal to zero (0.0). When stock financing growth is
11 zero, dividend growth depends solely on the br term.
12

13 **Q. What is the effect of the vs term when the market-to-book ratio is greater than 1.0?**

14 A. A market-to-book ratio greater than 1.0 reflects that investors expect an entity to earn a
15 book/accounting return on their equity investment greater than the cost of equity.
16 Equation 5 shows that, when the market-to-book ratio is greater than 1.0, the v term is also
17 greater than zero. The excess by which new shares are issued and sold over book value
18 per share of outstanding stock is a contribution that accrues to existing stockholders in the
19 form of a higher book value. The resulting higher book value leads to higher expected
20 earnings and dividends. Continued growth from the vs term is dependent upon the
21 continued issuance and sale of additional shares at a price that exceeds book value per
22 share.

1 **Q. What v_s estimate did Staff calculate from its analysis of the sample water utilities?**

2 A. Staff estimated an average stock financing growth of 2.4 percent for the sample water
3 utilities, as shown in Schedule JAC-6.

4
5 **Q. What would occur if an entity had a market-to-book ratio greater than 1.0 as a result**
6 **of investors expecting earnings to exceed its cost of equity, and subsequently**
7 **experienced newly-authorized rates equal only to its cost of equity?**

8 A. Holding all other factors constant, one would expect market forces to move the company's
9 stock price lower, closer to a market-to-book ratio of 1.0, to reflect investor expectations
10 of reduced expected future cash flows.

11
12 **Q. If the average market-to-book ratio of Staff's sample water utilities were to fall to 1.0**
13 **due to authorized ROEs equaling their cost of equity, would inclusion of the v_s term**
14 **be necessary to Staff's constant-growth DCF analysis?**

15 A. No. As discussed above, when the market-to-book ratio is equal to 1.0, none of the funds
16 raised from the sale of stock by the entity accrues to the benefit of existing shareholders
17 because the v term equals to zero and, consequently, the v_s term also equals zero. When
18 the market-to-book ratio equals 1.0, dividend growth depends solely on the br term.
19 Staff's inclusion of the v_s term assumes that the market-to-book ratio continues to exceed
20 1.0 and that the water utilities will continue to issue and sell stock at prices above book
21 value with the effect of benefitting existing shareholders.

22
23 **Q. What are Staff's historical and projected sustainable growth rates?**

24 A. Staff's estimated historical sustainable growth rate is 5.1 percent based on an analysis of
25 earnings retention for the sample water companies. Staff's projected sustainable growth

1 rate is 6.0 percent based on retention growth projected by *Value Line*. Schedule JAC-6
2 presents Staff's estimates of the sustainable growth rate.

3
4 **Q. What is Staff's expected infinite annual growth rate in dividends?**

5 A. Staff's expected dividend growth rate (g) is 5.0 percent, which is the average of historical
6 and projected DPS, EPS, and sustainable growth estimates. Staff's calculation of the
7 expected infinite annual growth rate in dividends is shown in Schedule JAC-8.

8
9 **Q. What is Staff's constant-growth DCF estimate for the sample utilities?**

10 A. Staff's constant-growth DCF estimate is 8.0 percent, as shown in Schedule JAC-3.

11
12 ***The Multi-Stage DCF***

13 **Q. Why did Staff implement the multi-stage DCF model to estimate LPSCO's cost of**
14 **equity?**

15 A. Staff generally uses the multi-stage DCF model to consider the assumption that dividends
16 may not grow at a constant rate. The multi-stage DCF uses two stages of growth, the first
17 stage (near-term) having a four-year duration, followed by the second stage (long-term) of
18 constant growth.

1 **Q. What is the mathematical formula for the multi-stage DCF?**

2 A. The multi-stage DCF formula is shown in the following equation:

Equation 7 :

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[\frac{1}{(1+K)} \right]^n$$

Where : P_0 = current stock price

D_t = dividends expected during stage 1

K = cost of equity

n = years of non – constant growth

D_n = dividend expected in year n

g_n = constant rate of growth expected after year n

3

4 **Q. What steps did Staff take to implement its multi-stage DCF cost of equity model?**

5 A. First, Staff projected future dividends for each of the sample water utilities using near-
6 term and long-term growth rates. Second, Staff calculated the rate (cost of equity) which
7 equates the present value of the forecasted dividends to the current stock price for each of
8 the sample water utilities. Lastly, Staff calculated an overall sample average cost of
9 equity estimate.

10

11 **Q. How did Staff calculate near-term (stage-1) growth?**

12 A. The stage-1 growth rate is based on *Value Line*'s projected dividends for the next twelve
13 months, when available, and on the average dividend growth (g) rate of 5.0 percent,
14 calculated in Staff's constant DCF analysis for the remainder of the stage.

1 **Q. How did Staff estimate long-term (stage-2) growth?**

2 A. Staff calculated the stage-2 growth rate using the arithmetic mean rate of growth in Gross
3 Domestic Product ("GDP") from 1929 to 2012.¹³ Using the GDP growth rate assumes
4 that the water utility industry is expected to grow at the same rate as the overall economy.
5

6 **Q. What is the historical GDP growth rate that Staff used to estimate stage-2 growth?**

7 A. Staff used 6.5 percent to estimate the stage-2 growth rate.
8

9 **Q. What is Staff's multi-stage DCF estimate for the sample utilities?**

10 A. Staff's multi-stage DCF estimate is 9.3 percent, as shown in Schedule JAC-3.
11

12 **Q. What is Staff's overall DCF estimate for the sample utilities?**

13 A. Staff's overall DCF estimate is 8.7 percent. Staff calculated the overall DCF estimate by
14 averaging the constant growth DCF (8.0%) and multi-stage DCF (9.3%) estimates, as
15 shown in Schedule JAC-3.
16

17 **Capital Asset Pricing Model**

18 **Q. Please describe the CAPM.**

19 A. The CAPM is used to determine the prices of securities in a competitive market. The
20 CAPM model describes the relationship between a security's investment risk and its
21 market rate of return. Under the CAPM, an investor requires the expected return of a
22 security to equal the rate on a risk-free security plus a risk premium. If the investor's
23 expected return does not meet or beat the required return, the investment is not
24 economically justified. The model also assumes that investors will sufficiently diversify

¹³ www.bea.doc.gov.

1 their investments to eliminate any non-systematic or unique risk.¹⁴ In 1990, Professors
2 Harry Markowitz, William Sharpe, and Merton Miller earned the Nobel Prize in
3 Economic Sciences for their contribution to the development of the CAPM.

4
5 **Q. Did Staff use the same sample water utilities in its CAPM and DCF cost of equity**
6 **estimation analyses?**

7 A. Yes. Staff's CAPM cost of equity estimation analysis uses the same sample water
8 companies as its DCF cost of equity estimation analysis.

9
10 **Q. What is the mathematical formula for the CAPM?**

11 A. The mathematical formula for the CAPM is:

12
Equation 8:

$$K = R_f + \beta (R_m - R_f)$$

where: R_f = risk free rate
 R_m = return on market
 β = beta
 $R_m - R_f$ = market risk premium
 K = expected return

13
14 The equation shows that the expected return (K) on a risky asset is equal to the risk-free
15 interest rate (R_f) plus the product of the market risk premium ($R_m - R_f$) multiplied by beta
16 (β) where beta represents the riskiness of the investment relative to the market.

¹⁴ The CAPM makes the following assumptions: 1) single holding period; 2) perfect and competitive securities market; 3) no transaction costs; 4) no restrictions on short selling or borrowing; 5) the existence of a risk-free rate; and 6) homogeneous expectations.

1 **Q. What is the risk-free rate?**

2 A. The risk-free rate is the rate of return of an investment free of default risk.

3

4 **Q. What does Staff use as surrogates to represent estimations of the risk-free rates of**
5 **interest in its historical and current market risk premium CAPM methods?**

6 A. Staff uses separate parameters as surrogates for the estimations of the risk-free rates of
7 interest for the historical market risk premium CAPM cost of equity estimation and the
8 current market risk premium CAPM cost of equity estimation. Staff uses the average of
9 three (5-, 7-, and 10-year) intermediate-term U.S. Treasury securities' spot rates in its
10 historical market risk premium CAPM cost of equity estimation, and the 30-year U.S.
11 Treasury bond spot rate in its current market risk premium CAPM cost of equity
12 estimation. Rates on U.S. Treasuries are largely verifiable and readily available.

13

14 **Q. What does beta measure?**

15 A. Beta is a measure of a security's price volatility, or systematic risk, relative to the market
16 as a whole. Since systematic risk cannot be diversified away, it is the only risk that is
17 relevant when estimating a security's required return. Using a baseline market beta
18 coefficient of 1.0, a security having a beta value less than 1.0 will be less volatile (i.e., less
19 risky) than the market. A security with a beta value greater than 1.0 will be more volatile
20 (i.e., more risky) than the market.

21

22 **Q. How did Staff estimate LPSCO's beta?**

23 A. Staff used the average of the *Value Line* betas for the sample water utilities as a proxy for
24 the Company's beta. Schedule JAC-7 shows the *Value Line* betas for each of the sample
25 water utilities. The 0.71 average beta coefficient for the sample water utilities is Staff's

1 estimated beta value for LPSCO. A security with a beta value of 0.71 has less volatility
2 than the market.

3
4 **Q. What is the market risk premium ($R_m - R_f$)?**

5 **A.** The market risk premium is the expected return on the market, minus the risk-free rate.
6 Simplified, it is the return an investor expects as compensation for market risk.

7
8 **Q. What did Staff use for the market risk premium?**

9 **A.** Staff uses separate calculations for the market risk premium in its historical and current
10 market risk premium CAPM methods.

11
12 **Q. How did Staff calculate an estimate for the market risk premium in its historical
13 market risk premium CAPM method?**

14 **A.** Staff uses the intermediate-term government bond income returns published in the
15 Ibbotson Associates' *Stocks, Bonds, Bills, and Inflation 2013 Classic Yearbook* to
16 calculate the historical market risk premium. Ibbotson Associates calculates the historical
17 risk premium by averaging the historical arithmetic differences between the S&P 500 and
18 the intermediate-term government bond income returns for the period 1926-2012. Staff's
19 historical market risk premium estimate is 7.2 percent, as shown in Schedule JAC-3.

20
21 **Q. How did Staff calculate an estimate for the market risk premium in its current
22 market risk premium CAPM method?**

23 **A.** Staff solves equation 8 above to arrive at a market risk premium using a DCF-derived
24 expected return (K) of 10.88 ($2.1 + 8.78^{15}$) percent using the expected dividend yield (2.1
25 percent over the next twelve months) and the annual per share growth rate (8.78 percent)

¹⁵ The three to five year price appreciation is 40%. $1.40^{0.25} - 1 = 8.78\%$.

1 that *Value Line* projects over the next three to five years for all dividend-paying stocks
2 under its review¹⁶ along with the current long-term risk-free rate (30-year Treasury note at
3 3.75 percent) and the market's average beta of 1.0. Staff calculated the current market
4 risk premium as 7.13 percent,¹⁷ as shown in Schedule JAC-3.

5
6 **Q. What is the result of Staff's historical market risk premium CAPM and current**
7 **market risk premium CAPM cost of equity estimations for the sample utilities?**

8 A. Staff's cost of equity estimates are 7.3 percent using the historical market risk premium
9 CAPM and 8.8 percent using the current market risk premium CAPM.

10
11 **Q. What is Staff's overall CAPM estimate for the sample utilities?**

12 A. Staff's overall CAPM cost of equity estimate is 8.1 percent which is the average of the
13 historical market risk premium CAPM (7.3 percent) and the current market risk premium
14 CAPM (8.8 percent) estimates, as shown in Schedule JAC-3.

15
16 **VII. SUMMARY OF STAFF'S COST OF EQUITY ANALYSIS**

17 **Q. What is the result of Staff's constant-growth DCF analysis to estimate the cost of**
18 **equity for the sample water utilities?**

19 A. Schedule JAC-3 shows the result of Staff's constant-growth DCF analysis. The result of
20 Staff's constant-growth DCF analysis is as follows:

21
22
$$k = 3.0\% + 5.0\%$$

23
24
$$k = 8.0\%$$

25

¹⁶ August 30, 2013 issue date.

¹⁷ $10.88\% = 3.75\% + (1) (7.13\%)$.

Staff's constant-growth DCF estimate of the cost of equity for the sample water utilities is 8.0 percent.

Q. What is the result of Staff's multi-stage DCF analysis to estimate of the cost of equity for the sample utilities?

A. Schedule JAC-9 shows the result of Staff's multi-stage DCF analysis. The result of Staff's multi-stage DCF analysis is:

Company	Equity Cost Estimate (k)
American States Water	9.1%
California Water	9.5%
Aqua America	8.7%
Connecticut Water	9.7%
Middlesex Water	10.0%
SJW Corp	9.1%
York Water	<u>9.2%</u>
Average	9.3%

Staff's multi-stage DCF estimate of the cost of equity for the sample water utilities is 9.3 percent.

Q. What is Staff's overall DCF estimate of the cost of equity for the sample utilities?

A. Staff's overall DCF estimate of the cost of equity for the sample utilities is 8.7 percent. Staff calculated an overall DCF cost of equity estimate by averaging Staff's constant growth DCF (8.0 percent) and Staff's multi-stage DCF (9.3 percent) estimates, as shown in Schedule JAC-3.

1 **Q. What is the result of Staff's historical market risk premium CAPM analysis to**
2 **estimate of the cost of equity for the sample utilities?**

3 A. Schedule JAC-3 shows the result of Staff's CAPM analysis using the historical risk
4 premium estimate. The result is as follows:

5
6
$$k = 2.2\% + 0.71 * 7.2\%$$

7
$$k = 7.3\%$$

8

9 Staff's CAPM estimate (using the historical market risk premium) of the cost of equity to
10 the sample water utilities is 7.3 percent.

11
12 **Q. What is the result of Staff's current market risk premium CAPM analysis to**
13 **estimate the cost of equity for the sample utilities?**

14 A. Schedule JAC-3 shows the result of Staff's CAPM analysis using the current market risk
15 premium estimate. The result is:

16
$$k = 3.8\% + 0.71 * 7.1\%$$

17
$$k = 8.8\%$$

18

19 Staff's CAPM estimate (using the current market risk premium) of the cost of equity to the
20 sample water utilities is 8.8 percent.

21
22 **Q. What is Staff's overall CAPM estimate of the cost of equity for the sample utilities?**

23 A. Staff's overall CAPM estimate for the sample utilities is 8.1 percent. Staff's overall
24 CAPM estimate is the average of the historical market risk premium CAPM (7.3 percent)
25 and the current market risk premium CAPM (8.8 percent) estimates, as shown in Schedule
26 JAC-3.

1 **Q. Please summarize the results of Staff's cost of equity analysis for the sample utilities.**

2 A. The following table shows the results of Staff's cost of equity analysis:

3 **Table 2**

Method	Estimate
Average DCF Estimate	8.7%
Average CAPM Estimate	8.1%
Overall Average	8.4%

4
5 Staff's average estimate of the cost of equity to the sample water utilities is 8.4 percent.

6
7 **VIII. FINAL COST OF EQUITY ESTIMATES FOR LPSCO**

8 **Q. Please compare LPSCO's capital structure to that of Staff's seven sample companies.**

9 A. The average capital structure for the sample water utilities is composed of 50.3 percent
10 debt and 49.7 percent equity, as shown in Schedule JAC-4. In contrast, LPSCO's capital
11 structure is composed of 15.9 percent debt and 84.1 percent equity. Since LPSCO's
12 capital structure is less leveraged than that of the average sample water utility, its
13 stockholders bear less financial risk than do equity shareholders of the sample utilities.

14
15 **Q. Does LPSCO's reduced financial risk exposure affect its cost of equity?**

16 A. Yes. As previously discussed, financial risk is a component of market risk and investors
17 require compensation for market risk. Thus, because LPSCO has less exposure to
18 financial risk than does the sample average utility, its cost of equity is *lower* than that of
19 the sample water utilities.

1 **Q. Has Staff quantified the impact of LPSCO's reduced exposure to financial risk**
2 **relative to that of the sample water utilities for purposes of determining the**
3 **appropriate adjustment to be made to the Company's cost of equity in this**
4 **proceeding?**

5 A. Yes. Staff used the methodology developed by Professor Robert Hamada of the
6 University of Chicago, which incorporates capital structure theory with the CAPM, to
7 estimate the effect of LPSCO's capital structure on its cost of equity. Staff calculated a
8 downward financial risk adjustment for LPSCO of negative 60 basis points (-0.6 percent).
9 LPSCO's cost of equity adjusted for financial risk (7.8 percent) can be determined by
10 subtracting this 0.6 percent financial risk adjustment from Staff's average estimate of the
11 cost of equity to the sample water utilities (8.4 percent).
12

13 **Q. Does Staff have established criteria for determining when to apply a downward**
14 **financial risk adjustment?**

15 A. Yes. Staff normally applies two criteria in assessing whether application of a downward
16 financial risk adjustment is appropriate. The first consideration is whether the utility has a
17 reasonably economical capital structure. Staff considers a capital structure composed of
18 no more than 60 percent equity to meet this condition. If equity exceeds 60 percent, as it
19 does for LPSCO, Staff considers application of a downward financial risk adjustment to
20 be appropriate if the utility meets the second criteria. The second condition is whether the
21 utility has access to equity capital markets. Because LPSCO's parent, Algonquin Power
22 and Utilities Corporation, is publicly-traded, LPSCO is assumed to have access to the
23 equity capital markets; accordingly, Staff recommends a downward financial risk
24 adjustment to LPSCO's cost of equity. Staff's methodology for applying a downward
25 financial risk adjustment encourages a utility with access to the equity capital markets to

1 use that access to manage its capital structure with economic efficiency and encourages a
2 utility that lacks access to the equity capital markets to maintain a healthy capital
3 structure.

4
5 **Q. Did Staff consider factors other than the results of its technical models in its cost of**
6 **equity analysis?**

7 A. Yes. In consideration of the relatively uncertain status of the economy and the market that
8 currently exists, Staff is proposing an upward economic assessment adjustment to the cost
9 of equity. In this case, Staff recommends a 60 basis point (0.6 percent) upward economic
10 assessment adjustment, as shown in Schedule JAC-3.

11
12 **Q. What is Staff's ROE estimate for LPSCO?**

13 A. Staff determined an ROE estimate of 8.4 percent for LPSCO based on cost of equity
14 estimates for the sample companies of 8.7 percent for the DCF and 8.1 percent for the
15 CAPM. Staff recommends adoption of a 60 basis point downward financial risk
16 adjustment and a 60 basis point upward economic assessment adjustment resulting in an
17 8.4 percent Staff-recommended cost of equity, as shown in Schedule JAC-3.

18
19 **IX. RATE OF RETURN RECOMMENDATION**

20 **Q. What overall rate of return did Staff determine for LPSCO?**

21 A. Staff determined an 8.1 percent ROR for the Company, as shown in Schedule JAC-1 and
22 the following table:
23

Table 3

	Weight	Cost	Weighted Cost
Long-term Debt	15.9%	6.4%	1.0%
Common Equity	84.1%	8.4%	<u>7.1%</u>
Overall ROR			<u>8.1%</u>

X. STAFF RESPONSE TO COMPANY'S COST OF CAPITAL WITNESS MR. THOMAS J. BOURRASSA

Q. Please summarize Mr. Bourassa's analyses and recommendations.

A. Mr. Bourassa recommends a 10.00 percent ROE based on estimates derived from two constant growth DCF analyses, two CAPM analyses, and two Build-up risk premium models designed as a check for reasonableness to his DCF and CAPM results, using a proxy sample of six publicly-traded water companies. He proposes a capital structure consisting of 15.87 percent long-term debt and 84.13 percent equity, with his proposed cost of debt being 6.86 percent. Mr. Bourassa's recommended ROE includes a downward 70 basis point financial risk adjustment and an upward 50 basis point small company risk premium. His overall recommended rate of return for the Company is 9.5 percent.

For purposes of his constant growth DCF analyses, Mr. Bourassa gives a 50 percent weight to the estimates derived from his Future Growth DCF model and a 50 percent weight to the estimates derived from his Past and Future Growth DCF Model. In his primary Future Growth DCF model, Mr. Bourassa relies exclusively (i.e., a 100 percent weight) on analysts' forecasts of EPS growth to estimate the dividend growth (g) component (See TJB Schedule D-4.6). In his Past and Future Growth DCF model, Mr. Bourassa estimates his dividend growth (g) rate by giving 50 percent weight to historical measures of growth in annual share price, BVPS, EPS and DPS over a five-year period,

1 and 50 percent weight to the dividend growth rate obtained from his primary Future
2 Growth DCF model (See TJB Schedule D-4.4). Thus, for purposes of the overall dividend
3 growth (g) rate used in his constant growth DCF analyses, Mr. Bourassa effectively gives
4 a 75 percent weight to the results obtained from analysts forecasts' for EPS growth and
5 only a 25 percent weight to the results obtained from historical measures of dividend
6 growth (See TJB Schedule D-4.8). In each of his two constant growth DCF analyses, Mr.
7 Bourassa uses a 12-month average stock price to calculate an average annual current
8 dividend yield (D_0/P_0) (See TJB Schedule D-4.7).

9
10 For purposes of his CAPM analyses, Mr. Bourassa presents estimates based upon both
11 historical and current market risk premia. In both, however, he uses a 3.9 percent
12 forecasted risk free (R_f) rate based, in part, upon estimates from Value Line and Blue
13 Chip Consensus Forecasts for the 30-year long-term Treasury yield covering the period,
14 2013-2015 (See TJB Schedule D-4.10).

15
16 **Q. Does Staff have any comments on Mr. Bourassa's sole reliance on analysts' forecasts**
17 **of EPS growth rates to estimate dividend growth rate (g) in his Future Growth DCF**
18 **analysis?**

19 **A.** Yes. Exclusive reliance on analysts' forecasts of earnings growth to forecast DPS is
20 inappropriate because it assumes that investors do not look at other relevant information
21 such as historical dividend and earnings growth. Generally, analysts' forecasts are known
22 to be overly optimistic. Sole use of analysts' forecasts to calculate the expected dividend
23 growth rate, (g), serves to inflate that component of the DCF model and, consequently, the
24 estimated cost of equity. The appropriate growth rate to use in the DCF model is the
25 dividend growth rate expected by *investors*, not by analysts. Investors are assumed to be
26 rational, and as such will want to take into consideration all relevant available information

1 prior to making an investment decision. Therefore, it is reasonable to assume that
2 investors would consider both historical measures of past growth, as well as analysts'
3 forecasts of future growth.

4
5 **Q. Does the narrative of Mr. Bourassa's Direct testimony state that he relies exclusively**
6 **on analysts' forecasts of EPS growth to estimate the expected dividend growth rate**
7 **(g) in his Future Growth DCF model?**

8 A. No. Mr. Bourassa states only that "I have used analyst growth forecasts, where
9 available,"¹⁸ and that "I use analysts' forecasts of growth as a primary estimate of
10 growth."¹⁹ Only when referring to TJB Schedule D-4.6 does one learn that he has relied
11 exclusively on analysts' forecasts of EPS growth to estimate the dividend growth (g) rate
12 in his Future Growth DCF model.

13
14 **Q. Does Staff have evidence to support its assertion that exclusive reliance on analysts'**
15 **forecasts of earnings growth in the DCF model would result in inflated cost of equity**
16 **estimates?**

17 A. Yes. Experts in the financial community have commented on the optimism in analysts'
18 forecasts of future earnings.²⁰ A study cited by David Dreman in his book *Contrarian*
19 *Investment Strategies: The Next Generation* found that *Value Line* analysts were
20 optimistic in their forecasts by 9 percent annually, on average for the 1987 – 1989 period.
21 Another study conducted by David Dreman found that between 1982 and 1997, analysts
22 overestimated the growth of earnings of companies in the S&P 500 by 188 percent.

¹⁸ Direct testimony of Mr. Thomas J. Bourassa, page 32, lines 16-17.

¹⁹ Direct testimony of Mr. Thomas J. Bourassa, page 33, lines 4-5.

²⁰ See Seigel, Jeremy J. *Stocks for the Long Run*. 2002. McGraw-Hill. New York. p. 100. Dreman, David. *Contrarian Investment Strategies: The Next Generation*. 1998. Simon & Schuster. New York. pp. 97-98. Malkiel, Burton G. *A Random Walk Down Wall Street*. 2003. W.W. Norton & Co. New York. p. 175. Testimony of Professors Myron J. Gordon and Lawrence I. Gould, consultant to the Trial Staff (Common Carrier Bureau), FCC Docket 79-63, p. 95.

1 Burton Malkiel, of Princeton University, conducted a study of the 1- and 5-year earnings
2 forecasts made by some of the most respected names in the investment business. His
3 results showed that when compared with actual earnings growth rates, the 5-year forecasts
4 made by professional analysts were far less accurate than estimates derived from several
5 naïve forecasting models, such as the long-run growth rate in national income. In the
6 following excerpt from his book, *A Random Walk Down Wall Street*, Professor Malkiel
7 discusses the results of his study:

8 When confronted with the poor record of their five-year growth
9 estimates, *the security analysts honestly, if sheepishly, admitted*
10 *that five years ahead is really too far in advance to make reliable*
11 *projections.* They protested that although long-term projections
12 are admittedly important, they really ought to be judged on their
13 ability to project earnings changes one year ahead. Believe it or
14 not, it turned out that their one-year forecasts were even worse than
15 their five-year projections.

16 The analysts fought back gamely. They complained that it was
17 unfair to judge their performance on a wide cross section of
18 industries, because earnings for high-tech firms and various
19 “cyclical” companies are notoriously hard to forecast. “*Try us on*
20 *utilities,*” *one analyst confidently asserted. At the time they were*
21 *considered among the most stable group of companies because of*
22 *government regulation. So we tried it and they didn’t like it. Even*
23 *the forecasts for the stable utilities were far off the mark.*²¹
24 (Emphasis added)

25
26 **Q. Are investors aware of the problems related to analysts’ forecasts?**

27 A. Yes. In addition to books, there are numerous published articles appearing in *The Wall*
28 *Street Journal* and other financial publications that cast doubt on the accuracy of research
29 analysts’ forecasts.²² Investors, being keenly aware of these inherent biases in forecasts,
30 will use other methods to assess future growth.

²¹ Malkiel, Burton G. *A Random Walk Down Wall Street*. 2003. W.W. Norton & Co. New York. p. 175

²² See Smith, Randall & Craig, Suzanne. “Big Firms Had Research Ploy: Quiet Payments Among Rivals.” *The Wall Street Journal*. April 30, 2003. Brown, Ken. “Analysts: Still Coming Up Rosy.” *The Wall Street Journal*. January 27, 2003. p. C1. Karmin, Craig. “Profit Forecasts Become Anybody’s Guess.” *The Wall Street Journal*. January

1 **Q. Should DPS growth be considered in a DCF analysis?**

2 A. Yes. As previously stated in section VI of this testimony, the current market price of a
3 stock is equal to the present value of all expected future dividends, not future earnings.
4 Professor Jeremy Siegel from the Wharton School of Finance stated:

5
6 Note that the price of the stock is always equal to the present value
7 of all future *dividends* and not the present value of future earnings.
8 Earnings not paid to investors can have value only if they are paid
9 as dividends or other cash disbursements at a later date. Valuing
10 stock as the present discounted value of future earnings is
11 manifestly wrong and greatly overstates the value of the firm.²³
12

13 For valuation purposes, therefore, earnings paid out in the form of a dividend have
14 paramount relevancy to investors. Dividends, unlike earnings, cannot be manipulated or
15 overstated. Thus, historical DPS growth should receive appropriate consideration when
16 estimating the market cost of equity in the DCF model.

17
18 **Q. How does Mr. Bourassa calculate the expected dividend growth (g) rate used in his**
19 **Past and Future Growth DCF model?**

20 A. As shown in TJB Schedule D-4.4, Mr. Bourassa estimates the expected dividend growth
21 (g) rate in his Past and Future Growth DCF model²⁴ by providing a 50 percent weight²⁵ to
22 historical measures of growth in average annual share price, book value per share,
23 earnings per share and dividends per share for his sample companies over a five-year
24 period²⁶ and a 50 percent weight²⁷ to the average of analysts' forecasts for EPS growth
25 derived from his Future Growth DCF model.

21, 2003. p. C1. Gasparino, Charles. "Merrill Lynch Investigation Widens." *The Wall Street Journal*. April 11, 2002. p. C4. Elstein, Aaron. "Earnings Estimates Are All Over the Map." *The Wall Street Journal*. August 2, 2001. p. C1. Dreman, David. "Don't Count on those Earnings Forecasts." *Forbes*. January 26, 1998. p. 110.

²³ Siegel, Jeremy J. Stocks for the Long Run. 2002. McGraw-Hill. New York. P. 93.

²⁴ TJB Schedule D-4.4, Column 7.

²⁵ TJB Schedule D-4.4, Column 5.

²⁶ In TJB Schedule D-4.5, Mr. Bourassa presents this same dividend growth information over a ten-year period, but elects not to use it in his analysis.

1 **Q. For purposes of his overall DCF estimate, what weighting percentage does Mr.**
2 **Bourassa allocate to the dividend growth (g) component derived from analysts'**
3 **forecasts of dividend growth in his Future Growth DCF model?**

4 A. Effectively, for purposes of his overall DCF estimate Mr. Bourassa allocates a 75 percent
5 weighting to the results derived from analysts' forecasts of EPS growth in his Future
6 Growth DCF Model. As noted above, TJB Schedule D-4.4 presents the results of Mr.
7 Bourassa's Past and Future Growth DCF model, and provides for an equal weighting (i.e.,
8 50 percent) between historical and projected measures of dividend growth. However, as
9 shown in TJB Schedule D-4.8, for purposes of his overall dividend growth (g) estimate,²⁸
10 Mr. Bourassa combines the average of his Past and Future Growth DCF estimate²⁹ with
11 his average Future Growth DCF estimate.³⁰ In so doing, Mr. Bourassa effectively gives a
12 75 percent weight to the dividend growth (g) estimate derived from analysts' forecasts of
13 EPS growth his Future Growth DCF model and only a 25 percent weight to the dividend
14 growth estimate derived from historical measures of growth in his Past and Future Growth
15 DCF model.

16
17 **Q. Does Staff have any comment on Mr. Bourassa's use of growth in average annual**
18 **share price to estimate the expected dividend growth (g) component in his Past and**
19 **Future Growth DCF model?**

20 A. Yes. In and of itself, share price appreciation is not a determinant of dividend growth, and
21 for this reason Staff considers its use as a growth parameter to be inappropriate. However,
22 as Mr. Bourassa has utilized it as a growth parameter by which to estimate dividend
23 growth, Staff would point out that in both his five- and ten-year historical growth DCF
24 analyses, share price growth has exceeded that of dividend growth. Specifically, in his

²⁷ TJB Schedule D-4.4, Column 6.

²⁸ TJB Schedule D-4.8, Column 3.

²⁹ TJB Schedule D-4.8, Line 8.

³⁰ TJB Schedule D-4.8, Line 10.

1 five-year historical growth analysis (See TJB Schedule D-4.4), average share price growth
2 (4.82%) exceeds average DPS growth (3.33%) by 45 percent ($((.0482/.0333) - 1) = 45\%$),
3 and in his ten-year historical growth analysis (See TJB Schedule D-4.5), average share
4 price growth (5.82%) exceeds average DPS growth (3.08%) by 89 percent ($((.0582/.0308)$
5 $- 1) = 89\%$).

6
7 **Q. As it relates to the cost of equity, what is the significance of Mr. Bourassa's sample**
8 **water companies having experienced share price growth in excess of DPS growth**
9 **over both the last five- and ten-year periods?**

10 A. Simply stated, it is an indication that the cost of equity for publicly-traded water utilities
11 has fallen over each of the last 5- and 10-year periods. When the market price per share of
12 common stock for a given firm rises faster than does the dividend paid on a per share
13 basis, the dividend yield falls. As dividend yields fall, investors pay more for an
14 equivalent unit of return on their investment, resulting in a lower cost of equity. Markets
15 are efficient, and because prices for publicly traded stocks can rise only if investors are
16 willing to bid up the share price, when share price growth exceeds DPS growth over a
17 five- or ten-year period, the willingness of investors to continue to bid up share prices is
18 reflective of investor expectations that market returns have fallen. Thus, Mr. Bourassa's
19 use of share price growth increases his cost of equity estimate at a time when share price
20 growth actually reflects a decrease in cost of equity. This incongruous outcome is the
21 result of choosing an inappropriate parameter for dividend growth in the DCF model.

1 **Q. Does Staff consider Mr. Bourassa's use of a twelve-month average stock price to be**
2 **an optimum choice for purposes of calculating the current dividend yield (D_0/P_0) in**
3 **his two constant growth DCF models?**

4 A. No. The current dividend yield (D_0/P_0) component in the DCF model is better reflected by
5 using a current spot price, not an historical average stock price. Use of average stock
6 prices to calculate the current dividend yield employs stale information and is not
7 reflective of current investor expectations (See TJB Schedule D-4.7).³¹

8
9 **Q. Turning to Mr. Bourassa's CAPM analyses, does Staff agree with his use of a**
10 **forecasted risk-free interest rate?**

11 A. No. The appropriate risk-free interest rate to be used is the current rate borne by investors
12 in the market. Use of a forecasted risk-free rate only serves to overstate the estimated
13 market cost of equity.

14
15 **Q. What risk-free rate does Mr. Bourassa use in his CAPM analyses?**

16 A. In both his historical- and current market risk premia CAPM analyses, Mr. Bourassa uses
17 a forecasted risk-free rate (R_f) based, in part, upon estimates from Value Line and Blue
18 Chip Consensus Forecasts for the 30-year long-term Treasury yield covering the period,
19 2013-2015. The forecasted rate used by Mr. Bourassa in his CAPM analyses is 3.9
20 percent. At present, the current 30-year long-term Treasury yield is 3.8 percent, which
21 suggests that he has overstated the risk-free rate in his CAPM analysis by 10 basis points.

³¹ A review of TJB Schedule D-4.7 indicates that rather than using the annual dividend (D_0) paid by each of his sample companies in 2012 for purposes of calculating the current dividend (D_0/P_0) yield, Mr. Bourassa has used the annual dividend (D_0) paid in 2011.

1 **Q. Does Staff have any comment regarding Mr. Bourassa's downward 70 basis point**
2 **financial risk adjustment?**

3 A. Yes. In the narrative of his Direct testimony, Mr. Bourassa states that a "downward
4 adjustment of no more than 80 basis points" is warranted to give recognition to LPSCO's
5 diminished exposure to financial risk.³² A review of TJB Schedule D-4.1, however,
6 indicates that he confined his downward financial risk adjustment to only 70 basis points.
7 As noted in TJB Schedule D-4.1, details of Mr. Bourassa's financial risk computation are
8 presented in TJB Schedule D-4.22. Staff reviewed the work papers supporting TJB
9 Schedule D-4.22, and in so doing determined that properly calculated, Mr. Bourassa's
10 downward financial risk adjustment equated to 79 basis points (0.79 percent). Based upon
11 this calculation, Mr. Bourassa has understated his downward financial risk adjustment, for
12 rather than rounding down to 70 basis points, he rightly should have rounded up to 80
13 basis points, a level that he, himself, acknowledges to be appropriate.

14
15 **Q. Does Staff have any comment regarding Mr. Bourassa's proposed 50 basis point**
16 **small company risk premium?**

17 A. Yes. The Commission previously ruled in Decision No. 64282³³ for Arizona Water that
18 firm size does not warrant recognition of a risk premium stating, "We do not agree with
19 the Company's proposal to assign a risk premium to Arizona Water based on its size
20 relative to other publicly traded water utilities...." The Commission confirmed its
21 previous ruling in Decision No. 64727³⁴ for Black Mountain Gas agreeing with Staff that
22 "the 'firm size phenomenon' does not exist for regulated utilities, and that therefore there
23 is no need to adjust for risk for small firm size in utility regulation." All companies have
24 firm-specific risks; therefore, the existence of unique risks for a company does not lead to

³² See Bourassa Direct, p.43, line 9.

³³ Dated December 28, 2001.

³⁴ Dated April 17, 2002.

1 the conclusion that its total risk is greater than other entities. Moreover, as previously
2 discussed, investors cannot expect compensation for firm-specific risk since it can be
3 eliminated through diversification.
4

5 **XI. CONCLUSION**

6 **Q. Please summarize Staff's recommendations.**

7 A. Staff recommends that the Commission adopt an 8.1 percent overall rate of return for the
8 Company, a capital structure composed of 15.9 percent debt and 84.1 percent equity, an
9 8.4 percent cost of equity estimate, a 60 basis point (0.60 percent) downward financial risk
10 adjustment and a 60 basis point (0.60 percent) upward economic assessment adjustment.
11

12 **Q. Does this conclude your direct testimony?**

13 A. Yes, it does.

Litchfield Park Service Company Cost of Capital Calculation
Capital Structure
And Weighted Average Cost of Capital
Staff Recommended and Company Proposed

[A]	[B]	[C]	[D]
<u>Description</u>	<u>Weight (%)</u>	<u>Cost</u>	<u>Weighted Cost</u>
Staff Recommended Structure			
Debt	15.9%	6.4%	1.0%
Common Equity	84.1%	8.4%	<u>7.1%</u>
Weighted Average Cost of Capital			8.1%
Company Proposed Structure			
Debt	15.87%	6.86%	1.09%
Common Equity	84.13%	10.00%	<u>8.41%</u>
Weighted Average Cost of Capital			9.50%

[D] : [B] x [C]

Supporting Schedules: JAC-2, JAC-3 and JAC-4.

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Litchfield Park Service Company Cost of Capital Calculation
Final Cost of Equity Estimates
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]
DCF Method				
Constant Growth DCF Estimate		$\frac{D_1}{P_0}^1$	+	g^2
Multi-Stage DCF Estimate		3.0%	+	5.0%
Average DCF Estimate				=
				=
				=
				k
				8.0%
				9.3%
				8.7%
CAPM Method				
Historical Market Risk Premium ³	R_f	+	β^5	x
Current Market Risk Premium ⁴	2.2%	+	0.71	x
Average CAPM Estimate	3.8%	+	0.71	x
				(R_p)
				7.2% ⁶
				7.1% ⁷
				=
				=
				=
				k
				7.3%
				8.8%
				8.1%
Average of Overall Estimates				
Economic Assessment Adjustment				
Sub-Total				
Financial risk adjustment				
Total				
				8.4%
				0.6%
				9.0%
				-0.6%
				8.4%

1 MSN Money and Value Line
2 Schedule JAC-8
3 Risk-free rate (Rf) for 5, 7, and 10 year Treasury rates from the U.S. Treasury Department at www.ustreas.gov
4 Risk-free rate (Rf) for 30 Year Treasury bond rate from the U.S. Treasury Department at www.ustreas.gov
5 Value Line
6 Historical Market Risk Premium (Rp) calculated from 2013 Ibbotson S&P Classic Yearbook data
7 Testimony

Litchfield Park Service Company Cost of Capital Calculation
Average Capital Structure of Sample Water Utilities

[A]	[B]	[C]	[D]
<u>Company</u>	<u>Debt</u>	<u>Common Equity</u>	<u>Total</u>
American States Water	43.3%	56.7%	100.0%
California Water	54.2%	45.8%	100.0%
Aqua America	55.2%	44.8%	100.0%
Connecticut Water	55.3%	44.7%	100.0%
Middlesex Water	43.1%	56.9%	100.0%
SJW Corp	56.2%	43.8%	100.0%
York Water	<u>45.0%</u>	<u>55.0%</u>	<u>100.0%</u>
Average Sample Water Utilities	50.3%	49.7%	100.0%
LPSCO - Actual Capital Structure	15.9%	84.1%	100.0%

Source:

Sample Water Companies from Value Line

Litchfield Park Service Company Cost of Capital Calculation
Growth in Earnings and Dividends
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]
Company	Dividends Per Share 2002 to 2012 <u>DPS¹</u>	Dividends Per Share Projected <u>DPS¹</u>	Earnings Per Share 2002 to 2012 <u>EPS¹</u>	Earnings Per Share Projected <u>EPS¹</u>
American States Water	3.9%	7.2%	7.7%	1.2%
California Water	1.2%	7.4%	5.0%	5.8%
Aqua America	7.7%	8.3%	7.3%	8.0%
Connecticut Water	1.7%	3.5%	3.2%	2.7%
Middlesex Water	1.6%	1.6%	2.1%	5.0%
SJW Corp	4.4%	4.9%	4.2%	6.3%
York Water	<u>4.4%</u>	<u>3.8%</u>	<u>6.1%</u>	<u>4.6%</u>
Average Sample Water Utilities	3.6%	5.2%	5.1%	4.8%

¹ Value Line

Litchfield Park Service Company Cost of Capital Calculation
Sustainable Growth
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]
Company	Retention Growth 2002 to 2012 br	Retention Growth Projected br	Stock Financing Growth vs	Sustainable Growth 2002 to 2012 br + vs	Sustainable Growth Projected br + vs
American States Water	3.8%	5.1%	1.6%	5.4%	6.7%
California Water	2.4%	3.2%	1.5%	3.9%	4.7%
Aqua America	3.9%	4.4%	1.9%	5.8%	6.3%
Connecticut Water	2.0%	3.0%	3.9%	5.8%	6.9%
Middlesex Water	1.2%	2.8%	3.1%	4.3%	5.9%
SJW Corp	3.5%	3.8%	0.1%	3.6%	3.9%
York Water	<u>2.2%</u>	<u>2.8%</u>	<u>4.5%</u>	<u>6.7%</u>	<u>7.3%</u>
Average Sample Water Utilities	2.7%	3.6%	2.4%	5.1%	6.0%

[B]: Value Line

[C]: Value Line

[D]: Value Line, MSN Money, and Form 10-Ks filed with the Securities and Exchange Commission (<http://www.sec.gov/>)

[E]: [B]+[D]

[F]: [C]+[D]

Litchfield Park Service Company Cost of Capital Calculation
Selected Financial Data of Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[G]
<u>Company</u>	<u>Symbol</u>	<u>Spot Price</u> <u>8/28/2013</u>	<u>Book Value</u>	<u>Mkt To</u> <u>Book</u>	<i>Value Line</i> <u>Beta</u> <i>β</i>	<i>Raw</i> <u>Beta</u> <i>β_{raw}</i>
American States Water	AWR	54.99	23.56	2.3	0.70	0.52
California Water	CWT	20.42	11.62	1.8	0.65	0.45
Aqua America	WTR	31.52	9.92	3.2	0.60	0.37
Connecticut Water	CTWS	30.75	13.95	2.2	0.75	0.60
Middlesex Water	MSEX	20.76	11.98	1.7	0.70	0.52
SJW Corp	SJW	27.01	15.21	1.8	0.85	0.75
York Water	YORW	19.71	8.13	<u>2.4</u>	<u>0.70</u>	<u>0.52</u>
Average				2.2	0.71	0.53

[C]: Msn Money

[D]: Value Line

[E]: [C] / [D]

[F]: Value Line

[G]: $(-0.35 + [F]) / 0.67$

Litchfield Park Service Company Cost of Capital Calculation
Calculation of Expected Infinite Annual Growth in Dividends
Sample Water Utilities

[A]	[B]
<u>Description</u>	<u>g</u>
DPS Growth - Historical ¹	3.6%
DPS Growth - Projected ¹	5.2%
EPS Growth - Historical ¹	5.1%
EPS Growth - Projected ¹	4.8%
Sustainable Growth - Historical ²	5.1%
<u>Sustainable Growth - Projected²</u>	<u>6.0%</u>
Average	5.0%

¹ Schedule JAC-5

² Schedule JAC-6

Litchfield Park Service Company Cost of Capital Calculation
Multi-Stage DCF Estimates
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
<u>Company</u>	Current Mkt. Price (P_0) ¹	Projected Dividends ² (Stage 1 growth)				Stage 2 growth ³	Equity Cost Estimate (K) ⁴
	8/28/2013	d_1	d_2	(D_t)		(g_n)	
		d_1	d_2	d_3	d_4		
American States Water	55.0	1.52	1.60	1.68	1.76	6.5%	9.1%
California Water	20.4	0.65	0.68	0.72	0.75	6.5%	9.5%
Aqua America	31.5	0.74	0.78	0.82	0.86	6.5%	8.7%
Connecticut Water	30.8	1.02	1.07	1.12	1.18	6.5%	9.7%
Middlesex Water	20.8	0.76	0.79	0.83	0.88	6.5%	10.0%
SJW Corp	27.0	0.74	0.77	0.81	0.85	6.5%	9.1%
York Water	19.7	0.55	0.58	0.61	0.64	6.5%	9.2%

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[\frac{1}{(1+K)} \right]^n$$

Average 9.3%

Where : P_0 = current stock price
 D_t = dividends expected during stage 1
 K = cost of equity
 n = years of non – constant growth
 D_n = dividend expected in year n
 g_n = constant rate of growth expected after year n

1 [B] see Schedule JAC-7

2 Derived from Value Line Information

3 Average annual growth in GDP 1929 - 2012 in current dollars.

4 Internal Rate of Return of Projected Dividends

BEFORE THE ARIZONA CORPORATION COMMISSION

BOB STUMP

Chairman

GARY PIERCE

Commissioner

BRENDA BURNS

Commissioner

BOB BURNS

Commissioner

SUSAN BITTER SMITH

Commissioner

IN THE MATTER OF THE APPLICATION OF)
LITCHFIELD PARK SERVICE CORPORATION)
AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE CURRENT FAIR)
VALUE OF ITS UTILITY PLANT AND)
PROPERTY AND FOR INCREASES IN ITS)
WASTEWATER AND CHARGES FOR UTILITY)
SERVICE BASED THERON)
_____)

DOCKET NO. SW-01428A-13-0042

IN THE MATTER OF THE APPLICATION OF)
LITCHFIELD PARK SERVICE CORPORATION)
AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE CURRENT FAIR)
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PROPERTY AND FOR INCREASES IN ITS)
WATER AND CHARGES FOR UTILITY)
SERVICE BASED THERON)
_____)

DOCKET NO. W-01428A-13-0043

DIRECT TESTIMONY

OF

DOROTHY HAINS, P. E.

UTILITIES ENGINEER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

SEPTEMBER 26, 2013

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Engineering Report for Litchfield Park Service Company Wastewater Division	DMH-2

INTRODUCTION

Q. Please state your name and business address.

A. My name is Dorothy Hains. My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. By whom and in what position are you employed?

A. I am employed by the Arizona Corporation Commission ("Commission" or "ACC") as a Utilities Engineer - Water/Wastewater in the Utilities Division.

Q. How long have you been employed by the Commission?

A. I have been employed by the Commission since January 1998.

Q. What are your responsibilities as a Utilities Engineer - Water/Wastewater?

A. My main responsibilities are to inspect, investigate and evaluate water and wastewater systems. This includes obtaining data, preparing reconstruction cost new and/or original cost studies, investigative reports, interpreting rules and regulations, and to suggest corrective action and provide technical recommendations on water and wastewater system deficiencies. I also provide written and oral testimony in rate cases and other cases before the Commission.

Q. How many companies have you analyzed for the Utilities Division?

A. I have analyzed more than 90 companies fulfilling these various responsibilities for Commission Utilities Division Staff ("Staff").

1 **Q. Have you previously testified before this Commission?**

2 A. Yes, I have testified on numerous occasions before this Commission.

3
4 **Q. What is your educational background?**

5 A. I graduated from the University of Alabama in Birmingham in 1987 with a Bachelor of
6 Science degree in Civil Engineering.

7
8 **Q. Briefly describe your pertinent work experience.**

9 A. Before my employment with the Commission, I was an Environmental Engineer for the
10 Arizona Department of Environmental Quality ("ADEQ") for ten years. Prior to that time,
11 I was an Engineering Technician with C. F. Hains, Hydrology in Northport, Alabama for
12 approximately five years.

13
14 **Q. Please state your professional membership, registrations, and licenses.**

15 A. I have been a registered Civil Engineer in Arizona since 1990. I am a member of the
16 American Society of Civil Engineering, American Water Works Association and Arizona
17 Water Association.

18
19 **PURPOSE OF TESTIMONY**

20 **Q. What was your assignment in this rate proceeding?**

21 A. My assignment was to provide Staff's engineering evaluations for the subject Litchfield
22 Park Service Company rate proceedings for its Water Division ("LPSC-W") and for its
23 Wastewater Division ("LPSC-WW").

1 **Q. What is the purpose of your testimony in this proceeding?**

2 A. To present the findings of Staff's engineering evaluation of the operations for LPSC -W
3 and LPSC-WW. The findings are contained in the Engineering Reports that I have
4 prepared for this proceeding. The reports are included as Exhibits DMH-1 and DMH-2 in
5 this pre-filed testimony.

6
7 **ENGINEERING REPORT**

8 **LPSC-W**

9 **Q. Would you briefly describe what was involved in preparing your Engineering Report**
10 **for this rate proceeding?**

11 A. After reviewing the applications for LPSC-W, I physically inspected the water system in
12 LPSC-W to evaluate their operation and to determine if any plant items were not used and
13 useful. I contacted the Maricopa County Department of Environmental Services
14 ("MCDES") to determine if the water system was in compliance with the Safe Drinking
15 Water Act water quality requirements. I also contacted the Arizona Department of Water
16 Resources ("ADWR") to determine if the water systems were in compliance with
17 ADWR's requirements governing water providers and/or community water systems.
18 After I obtained information from LPSC-W regarding plant improvements, permits,
19 chemical testing expenses, water usage data and tariff modifications, I analyzed that
20 information. Based on all the above, I prepared the attached Engineering Report for
21 LPSC-W.

22
23 **Q. Did LPSC-W proposed a Distribution System Improvement Charge ("DSIC")**
24 **mechanism for water in its application?**

25 A. Yes.

1 **Q. Is Staff recommending approval of a DSIC mechanism in this case?**

2 A. No. Staff would not recommend approval of a DSIC mechanism but has been working
3 with the Company on a System Improvement Benefits ("SIB") mechanism for LPSC-W.
4

5 **Q. Is Staff recommending SIB approval for LPSC-W at this time?**

6 A. No. LPSC-W is finalizing the documentation to support its request for a SIB mechanism
7 which Staff expects will be docketed soon. Staff will review the documentation and file
8 its recommendation with its rate design testimony.
9

10 **Q. Please describe the information contained in your Engineering Report for LPSC-W.**

11 A. The Reports are divided into three general sections: 1) *Executive Summary*,
12 2) *Engineering Report Discussion*, and 3) *Engineering Report Exhibits*. *The Engineering*
13 *Report Discussion* can be further divided into eleven subsections: A) Purpose of Report;
14 B) Location Of The Company; C) Description of System; D) Water Usage; E) Growth
15 Projection; F) MCDES Compliance; G) ADWR Compliance; H) ACC compliance; I)
16 Water Testing Expenses; J) Depreciation Rates; and (K) Other Issues. These subsections
17 provide information about the water systems serving LPSC-W.
18

19 **LPSC-WW**

20 **Q. Would you briefly describe what was involved in preparing your Engineering Report**
21 **for this rate proceeding?**

22 A. After reviewing the applications for LPSC-WW, I physically inspected the wastewater
23 system in LPSC-WW to evaluate their operation and to determine if any plant items were
24 not used and useful. I contacted ADEQ to determine if the wastewater system was in
25 compliance with the monitoring and reporting requirements for the Aquifer Protection

1 Permit, Reuse Permits and Arizona Pollutant Discharge Elimination System Permit. After
2 I obtained information from LPSC-W regarding plant improvements, permits, chemical
3 testing expenses, inflow/effluent discharge flow data, tariff modifications and post- test
4 year construction, I analyzed that information. Based on all the above, I prepared the
5 attached Engineering Report for LPSC-WW.

6
7 **Q. Did LPSC-WW propose a Collection System Improvement Charge ("CSIC")**
8 **mechanism for wastewater in its application?**

9 A. Yes.

10
11 **Q. Is Staff recommending approval of a CSIC mechanism in this case?**

12 A. No. Staff would not recommend approval of a CSIC mechanism but has been working
13 with the Company on a SIB mechanism for LPSC-WW.

14
15 **Q. Is Staff recommending SIB approval for LPSC-WW at this time?**

16 A. No. LPSC-WW is finalizing the documentation to support its request for a SIB
17 mechanism which Staff expects will be docketed soon. Staff will review the
18 documentation and file its recommendation with its rate design testimony.

19
20 **Q. Please describe the information contained in your Engineering Report for LPSC-**
21 **WW.**

22 A. The Report is divided into three general sections: 1) *Executive Summary*,
23 2) *Engineering Report Discussion*, and 3) *Engineering Report Exhibits*. *The Engineering*
24 *Report Discussion* can be further divided into eleven subsections: A) Purpose of Report;
25 B) Location of the LPSC-WW; C) Description of System; D) Wastewater Flow; E)

1 Growth Projection; F) ADEQ Compliance; G) ACC compliance; H) Wastewater Testing
2 Expenses; I) Depreciation Rates; and J) Other Issues. These subsections provide
3 information about the wastewater system serving LPSC-WW.
4

5 **RECOMMENDATIONS AND CONCLUSIONS**

6 **Q. What are Staff's conclusions and recommendations regarding to the operations of**
7 **LPSC-W and LPSC-WW?**

8 **A.** Staff's conclusions and recommendations regarding the LPSC-W's and LPSC-WW's
9 operations are listed below.
10

11 **LPSC-W**

12 **Recommendations:**

- 13 I. Staff recommends estimated annual water testing costs of \$62,478 for LPSC-W.
14
15 II. Staff recommends the depreciation rates by individual National Association of Regulatory
16 Utility Commissioners category, as delineated in Figure 6 in Report DMH-1.
17
18 III. Staff recommends approval of the meter and service line installation charges listed under
19 the columns labeled "Staff Recommendation" in Table 5 in Report DMH-1.
20
21 IV. Staff recommends approval of the revised Off Site Hookup Fee Tariff for Water in Figure
22 7 in Report DMH-1.
23 V. Staff recommends that the plant items listed in Table 8 in Report DMH-1 be reclassified
24 for accounting purposes as indicated.
25

1 VI. After discussions with Staff, the LPSC-W has agreed to implement the five BMP tariffs
2 included in the attachment labeled Figure 8. Currently, LPSC-W has five approved BMP
3 Tariffs on file with the Commission. With the addition of the five new BMPs, LPSC-W
4 will have a total of ten water conservation measures. Staff recommends that LPSC-W file
5 the five BMP tariffs included in Figure 8 with Docket Control, as a compliance item in
6 this docket within 45 days of the effective date of the decision in this proceeding.

7
8 **Conclusions:**

9 I. A check of the Commission's Compliance Section database dated June 6, 2013, indicated
10 that LPSC-W had no ACC delinquent compliance items.

11
12 II. LPSCO-W is in the ADWR Phoenix Active Management Area. Staff received a
13 Compliance Status Report from ADWR for LPSC-W on March 15, 2013. In its report
14 ADWR stated that LPSC-W is compliant with departmental requirements governing water
15 providers and/or community water systems.

16
17 III. In a Compliance Status Report dated March 25, 2013, MCESD reported that LPSC-W had
18 no major deficiencies and was delivering water that meets water quality standards required
19 by 40 CFR 141 (National Primary Drinking Water Regulations) and Arizona
20 Administrative Code, Title 18, Chapter 4.

21
22 IV. LPSCO-W has approved cross connection, curtailment and five BMP tariffs on file with
23 the Commission.

24

- 1 V. LPSCO-W has adequate production and storage capacities to support its existing customer
2 base and reasonable growth.
3
- 4 VI. LPSCO-W had 9.36 percent water loss during the test year which is within the allowable
5 limit of 10 percent.
6
- 7 VII. The plant items and the related expenses listed in Table 6 in Report DMH-1 are future
8 plant not currently used and useful to LPSC-W for provision of service.
9
- 10 VIII. The plant related expenses listed in Table 7 in Report DMH-1 were in service prior to the
11 Company's 2009 rate case.
12
- 13 IX. Staff has reviewed the 2013 Litchfield Park Water and Wastewater Facilities Assessment
14 Report. Staff found the LPSC-W proposed 5-year infrastructure replacement plan at a
15 cost of \$9,160,400 reasonable and appropriate. However, no "used and useful"
16 determination of the proposed plant items was made, and no conclusions should be
17 inferred for rate making or rate base purposes in the future.
18

19 **LPSC-WW**

20 **Recommendations:**

- 21 I. Staff recommends estimated annual water testing costs of \$22,005 for LPSC-WW.
22
- 23 II. Staff recommends the depreciation rates by individual National Association of Regulatory
24 Utility Commissioners category, as delineated in Figure 6 in Report DMH-2.
25
- 26 III. Staff recommends annual sludge testing cost of \$3,410.

1 IV. Staff recommends that the plant items listed in Table 6 in Report DMH-2 be reclassified
2 for accounting purposes as indicated.

3
4 V. Staff recommends denial of LPSC-WW's proposed modification to its existing Off-site
5 Hookup Fee Tariff for wastewater.

6
7 **Conclusions:**

8 I. A check of the Commission's Compliance Section database dated June 6, 2013, indicated
9 that LPSC-WW had no ACC delinquent compliance items.

10
11 II. In a Compliance Status Report dated April 3, 2013, ADEQ reported that LPSC-WW's
12 Palm Valley Water Reclamation Facility ("WRF") was in total compliance with ADEQ
13 regulations.

14
15 III. The Palm Valley WRF has adequate treatment capacity to serve the present customer base
16 and reasonable growth.

17
18 IV. The LPSC-WW Equalization Basin Rehabilitation Project is not used and useful.

19
20 V. All expenses and capital improvement costs related to future Sarival Wastewater
21 Treatment Plant and future final effluent recharge feasibility study are not used and useful
22 to LPSC-WW for provision of service.

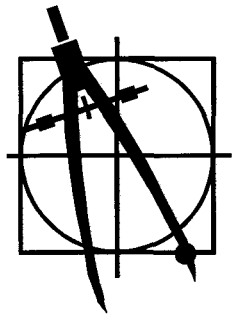
23
24 VI. Staff has reviewed the 2013 Litchfield Park Water and Wastewater Facilities Assessment
25 Report. Staff found the LPSC-WW proposed 5-year infrastructure replacement plan at a
26 cost of \$10,337,600 reasonable and appropriate. However, no "used and useful"

1 determination of the proposed plant items was made, and no conclusions should be
2 inferred for rate making or rate base purposes in the future.

3

4 **Q. Does this conclude your Direct Testimony?**

5 **A. Yes, it does.**



**Engineering Report
Litchfield Park Service Co. -
Water Division
Prepared By
Dorothy Hains, P. E.
Docket Nos. W-01428A-13-0043
(Rates)**

September 25, 2013

EXECUTIVE SUMMARY

Recommendations:

1. Arizona Corporation Commission (“ACC” or “Commission”) Utilities Division Staff (“Staff”) recommends estimated annual water testing costs of \$62,478 for Litchfield Park Service Co. – Water Division (“LPSC-W” or “Company”). (See §I and Table 4 for discussion and details.)
2. Staff recommends the depreciation rates by individual National Association of Regulatory Utility Commissioners category, as delineated in Figure 6. (See §J and Figure 6 for a discussion and a tabulation of the recommended rates.)
3. Staff recommends approval of the meter and service line installation charges listed under the columns labeled “Staff Recommendation” in Table 5. (See §K of report for discussion and details.)
4. Staff recommends approval of the revised Off Site Hookup Fee Tariff for Water in Figure 7. (See §K for discussion and details.)
5. Staff recommends that the plant items listed in Table 8 be reclassified for accounting purposes as indicated. (See §K for discussion and details.)
6. After discussions with Staff, the Company has agreed to implement the five BMP tariffs included in the attachment labeled Figure 8. Currently, the Company has five approved BMP Tariffs on file with the Commission. With the addition of the five new BMPs, LPSC-W will have a total of ten water conservation measures. Staff recommends that LPSC-W file the five BMP tariffs included in Figure 8 with Docket Control, as a compliance item in this docket within 45 days of the effective date of the decision in this proceeding. (See §K for discussion and details.)

Conclusions:

1. A check of the Commission's Compliance Section database dated June 6, 2013, indicated that LPSC-W had no ACC delinquent compliance items. (See §H of report for discussion and details.)
2. LPSCO-W is in the Arizona Department of Water Resources ("ADWR") Phoenix Active Management Area. Staff received a Compliance Status Report from ADWR for LPSC - W on March 15, 2013. In its report, ADWR stated that the Company is compliant with departmental requirements governing water providers and/or community water systems. (See §G of report for discussion and details.)
3. In a Compliance Status Report dated March 25, 2013, Maricopa County Environmental Services Department ("MCESD") reported that LPSC-W had no major deficiencies and was delivering water that meets water quality standards required by 40 CFR 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4. (See §F of report for discussion and details.)
4. LPSCO-W has approved cross connection, curtailment and five BMP tariffs on file with the Commission. (See §K of report for discussion and details.)
5. LPSCO-W has adequate production and storage capacities to support its existing customer base and reasonable growth. (See §C of report for discussion and details.)
6. LPSCO-W had 9.36 percent water loss during the test year which is within the allowable limit of 10 percent. (See §F report for discussion and details.)
7. The plant items and the related expenses listed in Table 6 are future plant not currently used and useful to LPSCO-W provision of service. (See §K of report for discussion and details.)
8. The plant related expenses listed in Table 7 were in service prior to the Company's 2009 rate case. (See §K of report for discussion and details.)
9. Staff found the proposed 5-year infrastructure replacement plan at a cost of \$9,160,400 to be reasonable and appropriate. However, no "used and useful" determination of the proposed plant items was made, and no conclusions should be inferred for rate making or rate base purposes in the future. (See §K for discussion and details.)

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**ENGINEERING REPORT
LITCHFIELD PARK SERVICE WATER COMPANY - WATER DIVISION
DOCKET NO. W-01428A-13-0043 (RATES)**

A. PURPOSE OF REPORT

This report was prepared in response to the application filed by Litchfield Park Service Company – Water Division (“LPSC-W” or “Company”) with the Arizona Corporation Commission (“ACC” or “the Commission”) to increase its water rates. The ACC Utilities Division Staff (“Staff”) engineering review and analysis of the subject application is presented in this report.

An inspection of the Company’s water system was conducted by Dorothy Hains, Staff Engineer, accompanied by Company Representatives, Chris Krygier (Manager), Matthew Garlick (Director), Clint Arndt (Manager) and Ed Solis (Supervisor) on May 20, 2013.

B. LOCATION OF THE COMPANY

LPSC-W is located in the west Phoenix Valley, west of the Agua Fria River and north of Interstate Highway 10. LPSC-W provides water service to communities within the City of Litchfield Park (“City”), City of Goodyear, City of Avondale, and some unincorporated areas of Maricopa County. Figure 1 shows the location of LPSC-W within Maricopa County and Figure 2 shows the approximate 21 square-miles of water certificated area.

C. DESCRIPTION OF SYSTEM

I. System Description

The operation of this water system consists of 12 wells, three arsenic treatment facilities, two storage tanks, three booster systems and a distribution system serving approximately 17,320 customers during the test year ending December 2012. LPSC-W uses a Supervisory Control and Data Acquisition (“SCADA”) system to communicate and control operation of wells, arsenic treatment facilities, storage tanks and booster pump stations. A detailed plant facility description is as follows:

Table 1 Plant Facility and Well Data in LPSC-W (in PWS #07-046)

Active Drinking Water Wells

ADWR No.	Well #	Year Drilled	Casing Size (inches)	Well Depth (ft)	Well Meter Size (inches)	Pump (HP)	Pump Yield (GPM)	Location
55-611726	Airline Well #4	1962	20	1,007	8	350	1,750 (max)	63202 N El Mirage Rd
55-611729	Airline Well #9	1960	20	997	8	350	1,820 (max)	6230 N 119 th Ave.
55-611727	Airline Well #5	1965	16	810	8	300	1,475 (max)	11902 Bethany Home Rd
55-611724	Airline	1964	16	800	12	250	1,200	6024 N El Mirage Rd

	Well #2							
55-214539	Airline Well #10	2007	16	700	12	150	700	N/A
55-533836	Town Well #6	1992	16	650	12	200	1,200	12660 W Indian School Rd, Litchfield Park
55-611678	Town Well #4	1966	16	685	12	150	1,200	4307 N 127 th Ave, Litchfield Park
55-611677	Town Well #5	1972	16	850	12	150	1,100	4450 N 127 th Ave., Litchfield Park
55-583454	Town Well #1	2001	16	740	12	200	550	13570 Plaza Circle, Avondale
55-611680	Town Well #2	1964	16	800	12	250	650	3840 N Dysart Rd., Avondale
55-611687	Well #34C	1954	14	700	8	150	1,000	1952 N Dysart Rd
55-611717	Well #20B	1962	20	1,100	10	200	1,400	15521 W Minnezona Ave

Active Storage, Pumping

Location	Structure or equipment	Capacity
Town Well Reservoir Site (4091 N Dysart Rd)		
Town Well Reservoir Site	Storage Tank	One 6.1 MG concrete underground Tank (38' deep, 160'x206')
Town Well Reservoir Site	Booster pump station	Three 200-HP (3,500 GPM/unit, electric engine) One 100-HP (1,900GPM/unit, electric engine) One 150-HP (1,200 GPM/unit natural gas engine, backup pump) Two 10" meters
Airline Reservoir (6302 N El Mirage Rd)		
Airline Reservoir Site	Storage Tank	One 4.5 MG concrete underground Tank (31.5' deep)
Airline Reservoir Site	Booster pump station	Four 250-HP (4,000 GPM/unit) One 30" meg flow meter VFD
Well #20B Arsenic Treatment Plant Site (15614 Charles Blvd)		
Well 20B ATP Site	Pressure tank	One 5,000 gal tank VFD Unit

Arsenic Treatment Facilities

Town Well Arsenic Removal Facility			
Location	Sources	Equipment	Capacity
Town Well Reservoir Site (4091 N Dysart Rd)	Town Wells: TW1, TW2 & TW6	Arsenic Removal Treatment Plant	4.5 MGD
Town Well Reservoir Site	Town Wells: TW1, TW2 & TW6	One Carbon dioxide (gas) feeding unit	26 Tons
Town Well Reservoir Site	Town Wells: TW1, TW2 & TW6	Four 12'-Diameter pressurized arsenic removal media (granular iron media) vessels	3,200 GPM/unit
Town Well Reservoir Site	Town Wells: TW1, TW2 & TW6	On-site sodium hypochlorite generator & two storage tanks	N/A
Town Well Reservoir Site	Town Wells: TW1, TW2 & TW6	One backwash unit	N/A
Town Well Reservoir Site	Town Wells: TW1, TW2 & TW6	One concrete backwash equalization tank	63,500 gallons
Airline Wellfield Arsenic Removal Facility			
Location	Sources	Equipment	Capacity
Airline Reservoir Site (6302 N El Mirage Rd)		Arsenic Removal Treatment Plant (coagulation-filtration)	8.4 MGD (max)
Airline Reservoir Site	Airline Wells: AL4, AL5 and AL9	On-site sodium hypochlorite generator & two storage tanks	N/A
Airline Reservoir Site	Airline Wells: AL4, AL5 and AL9	Ferric Oxide (Fe ₂ O ₃) injection unit & two 5-HP mixing pumps	1,400 GPM
Airline Reservoir Site	Airline Wells: AL4, AL5 and AL9	One Fe ₂ O ₃ Storage tank	5,000 gallons
Airline Reservoir Site	Airline Wells: AL4, AL5 and AL9	Three 8'-Diameter horizontal green sand filter media filter vessels	20,000 gallons/tank
Airline Reservoir Site	Airline Wells: AL4, AL5 and AL9	Backwashing Unit Two Backwash equalization tanks	12,500 gallons/tank
Well #20B Arsenic Treatment Plant			
Location	Sources	Equipment	Capacity
Well #20B Arsenic Treatment Plant Site (15614 Charles Blvd, Goodyear)	Well 20B	Arsenic Removal Treatment Plant	1,500 GPM
Well 20B ATP Site	Well 20B	Two 12' 4"-Diameter (5' shell) pressurized arsenic removal media (filled	752.6 GPM/unit

		with 3' deep granular iron media) vessels	
Well 20B ATP Site	Well 20B	One backwash wastewater holding tank	52,000 gallons

Distribution Mains in LPSC-W CC&N Area

Diameter (inches)	Material	Length (feet)
2	Ductile Iron Pipe ("DIP")	842
3	DIP	1,739
4	DIP	19,100
6	DIP	386,182
8	DIP	487,714
10	DIP	3,435
12	DIP	158,710
16	DIP	64,043
24	DIP	79,534
30	DIP	5,290
36	DIP	255
42	DIP	325

Meters in LPSC-W CC&N Area

Size (inches)	Quantity
5/8 x 3/4	63
3/4	9,313
1	5,931
1 1/2	194
2	635
3	32
4	19
8	2
10	1
Fire line	260

II. System Analysis

The water system has a total source capacity of 14,045 GPM and storage capacity of 10.6 million gallons that are adequate to serve the present customer base and reasonable growth.

D. WATER USAGE

Table 2 summarizes water usage in the LPSC-W CC&N area. Figure 4 is a graph that shows water consumption data in gallons per day per connection for the LPSC water system for the test year period of January 2012 through December 2012.

Table 2 Water Usage in Litchfield Park Service Co. - Water Division CC&N Area

Month	Number of Customers	Monthly Water Sold (in gallons)	Water pumped (in gallons)	Water purchased (in gallons)	Daily Average (in gallons per day per customer)
Jan 12	16,606	179,495,687	215,672,000	0	349
Feb 12	16,691	187,721,281	197,319,000	0	402
Mar 12	16,745	206,805,180	235,898,000	0	398
Apr 12	16,817	220,648,473	263,970,000	0	437
May 12	16,877	262,637,241	373,354,000	0	502
Jun 12	16,917	360,854,376	415,161,000	0	711
Jul 12	17,007	385,513,150	411,362,000	0	731
Aug 12	17,062	351,583,125	396,551,000	0	665
Sep 12	17,136	339,740,615	343,392,000	0	661
Oct 12	17,185	298,867,926	349,051,000	0	561
Nov 12	17,226	308,141,680	267,223,000	0	596
Dec 12	17,313	232,472,529	209,783,000	0	433
total		3,334,481,263	3,678,736,000	0	
Average					537

I. Water Sold

Based on information provided by the Company, the calculated highest use was 731 gallons per day (“GPD”) per customer in July and the lowest was 349 GPD per customer in January. The average water usage was 537 GPD per customer. Water use for the test year of 2012 is presented in Figure 3.

II. Non-account Water

Non-account water should be 10 percent or less. The Company reported 3,334,481,263 gallons sold and 3,678,736,000 gallons pumped, resulting in a water loss of 9.36 percent. This 9.36 percent is within the acceptable limit of 10 percent.

E. GROWTH PROJECTION

Figure 4 depicts the customer growth using linear regression analysis. The numbers of service connections were obtained from annual reports submitted to the Commission. At the end of the test year December 2012, the Company had 17,313 customers and it is projected that this system could have approximately 19,291 customers by December 2016. The following table summarizes Staff’s projected growth.

Table 3 Actual and Projected Growth (LPSC-Water)

Year	Nos. of Customers	
1999	4,724	Reported
2000	5,562	Reported
2001	6,515	Reported
2002	9,179	Reported
2003	10,786	Reported
2004	11,902	Reported
2005	12,978	Reported
2006	13,858	Reported
2007	15,949	Estimated
2008	16,023	Reported
2009	16,266	Reported
2010	16,533	Reported
2011	16,864	Reported
2012	17,313	Reported
2013	17,930	Estimated
2014	18,384	Estimated
2015	18,838	Estimated
2016	19,291	Estimated

**F. MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT
("MCESD") COMPLIANCE**

MCESD, acting as the formally delegated agent of the Arizona Department of Environmental Quality ("ADEQ") has reported in a Compliance Status Report dated March 25, 2013, that the Company's water system operating under public water system ("PWS") No. 10-046 had no major deficiencies and is delivering water that meets water quality standards required by 40 CFR 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4.)

**G. ARIZONA DEPARTMENT OF WATER RESOURCES ("ADWR")
COMPLIANCE**

LPSC-W is in the Phoenix Active Management Area. Staff received a Compliance Status Report from ADWR for LPSC-W on March 15, 2013. ADWR reports that LPSC-W is compliant with departmental requirements governing water providers and/or community water systems.

H. ACC COMPLIANCE

A check of the Commission's Compliance Section database dated June 6, 2013, indicated that the Company had no ACC delinquent compliance items.

I. WATER TESTING EXPENSES

LPSC-W reported its water testing expense at \$33,849 for the test year; however, LPSC-W requests to adjust its water testing expense to \$66,942 in the future years. Staff used ADEQ Monitoring Assistance Program (“MAP”) costs to develop testing costs based on the following assumptions:

1. MAP will do baseline testing on everything except copper, lead, bacteria, and disinfection by-products.
2. The estimated water testing expenses represent a minimum cost based on no “hits” other than lead and copper, and assume compositing of well samples. If any constituents were found, then the testing costs would dramatically increase. ADEQ testing is performed in 3-year compliance cycles. Therefore, monitoring costs are estimated for a 3-year compliance period and then presented on an annualized basis.
3. Staff estimated the MAP related testing fees based on the MCESD water quality compliance status report for calendar year 2012.
4. All monitoring expenses are based on Staff’s best knowledge of lab costs and methodology and one point of entry.

Staff recommends that a water testing expense of \$62,478 be used for this proceeding. Table 4 shows the estimated annual monitoring expense.

Table 4 Water Testing Cost (Litchfield Park Water District - PWS #07-046)

Monitoring – Ground Water (6 POEs & 12 wells)	No. of total tests per year	Cost per test	Cost per test (Company’s)	Company Reported Total Annual Test Costs	Company Requests future Total Annual Test Costs	Staff estimated annual cost (\$)
Bacteriological – monthly	600	\$13.50 ⁵	N/A	N/A	N/A	\$8,100
Radiochemical – (1/ 3 yr)	MAP		N/A	N/A	N/A	MAP
Gross Alpha			N/A	N/A	N/A	
Uranium			N/A	N/A	N/A	
Radium 228			N/A	N/A	N/A	
Radium 226			N/A	N/A	N/A	
Inorganics – Priority Pollutants	MAP			0		MAP
Phase II and V:						
IOCs - ½ year	MAP		N/A	N/A	N/A	MAP
SOCs - ½ year	MAP		N/A	N/A	N/A	MAP
VOCs - ½ year	MAP		N/A	N/A	N/A	MAP

Dioxin	MAP		N/A	N/A	N/A	MAP
Nitrites – 1/9 year	MAP		N/A	N/A	N/A	MAP
Nitrates – annual	MAP		N/A	N/A	N/A	MAP
Nitrates – quarterly ⁴	18 ⁴	\$20 ⁵	N/A	N/A	N/A	360
Asbestos – 1/9 year	MAP		N/A	N/A	N/A	MAP
MAP ¹	1	\$31,216 ¹				31,216 ¹
Lead & Copper	30 ²	\$19 ⁵	N/A	N/A	N/A	570
TTH/HHA5 – 4/year	24 ²	\$275 ⁶	N/A	N/A	N/A	6,600
Arsenic (additional)	728 ²	\$10 ⁵	N/A	N/A	N/A	7,280
Total Chlorine Residues	480 ²	\$13.50 ⁵	N/A	N/A	N/A	6,480
Iron	208 ³	\$9 ⁵	N/A	N/A	N/A	1,872
Total				\$33,849	\$66,942	\$62,478

Note: 1. MAP fee calculation is based on (1) 12,049 customers stated in MCESD Report for LPSC-W (issued on March 25, 2013); (2) \$2.57/customer of service fee; and (3) \$250 basic charge. Therefore, MAP fee would be \$31,216. ($2.57 * 12,049 + 250 = 31,216$)

2. Based on the Company's Response to DR #DH1.6, LPSC-W did 24 TTHM/HAA5 sample tests during the test year. LPSC also tested a total of 728 arsenic samples during the test year that included 208 arsenic samples from Well 20B, 208 samples from Airline Wells and 312 samples from Town Wells.

3. In the Company's Response to DR #DH 1.6, LPSC-W stated that 208 iron samples had been tested during the test year.

4. Based on the Company's Response to DR #DH4.10, LPSC-W sampled its nitrates on quarterly bases at its 6 POEs. Staff adjusts it to 20 additional samples because 6 samples are covered by MAP.

5. Based on Price Quotes provided by Legend Lab.

6. Prices provided by the Company's in its Response to DR #DH1.6.

Water testing expenses should be adjusted to the annual expense amount shown in Table 4 which totals **\$62,478**.

J. DEPRECIATION RATES

Staff has developed typical and customary depreciation rates within the range of anticipated equipment life. These rates are presented in Figure 6, and should be used to calculate the annual depreciation expense for the Company. Staff recommends that the depreciation rates by individual National Association of Regulatory Utility Commissioners ("NARUC") category, as delineated in Figure 6.

K. OTHER ISSUES

I. Service Line and Meter Installation Charges¹

LPSC-W proposes to revise all existing charges per size of meter to “At Cost” in its Meter and Service Line Installation Charge tariff. Staff has no problem agreeing with the Company’s proposal to charge “At Cost” for the larger, more costly meters (meters two-inches and larger). Staff however does not believe “At Cost” pricing flexibility is necessary or appropriate for the smaller more common meter sizes. The lots, terrain and soil conditions in the LPSC-W service area are typical and predictable. Therefore, Staff would not expect construction costs to vary significantly for the smaller meter sizes.² Staff believes that the Company’s service line and meter installation charges should be in Staff’s average range for these charges. Therefore, separate service line and meter charges were developed using an average charge in Staff’s range of charges for meters sizes smaller than two-inches. Staff recommends approval of the meter and service line installation charges listed under the columns labeled “Staff” in Table 5.

Table 5 Service Line and Meter Installation Charges (LPSC-W)

Meter Size	Current Service Line Installation Charge	Current Meter Installation Charge	Current Total Meter & Service Line Installation Charge	Company Proposed Total Installation Charge	Staff (Meter Installation Charge)	Staff (Service Line Installation Charge)	Staff Total Charge
5/8 x 3/4-inch	\$385	\$135	\$520	At Cost	\$445	\$155	\$600
3/4-inch	\$385	\$215	\$600	At Cost	\$445	\$255	\$700
1-inch	\$435	\$255	\$690	At Cost	\$495	\$315	\$810
1½-inch	\$470	\$465	\$935	At Cost	\$550	\$525	\$1,075
2-inch (Turbine)	\$630	\$965	\$1,598	At Cost	At Cost	At Cost	At Cost
2-inch (Compound)	\$630	\$1,690	\$2,320	At Cost	At Cost	At Cost	At Cost
3-inch (Turbine)	\$805	\$1,470	\$2,275	At Cost	At Cost	At Cost	At Cost
3-inch (Compound)	\$845	\$2,265	\$3,110	At Cost	At Cost	At Cost	At Cost
4-inch (Turbine)	\$1,170	\$2,350	\$3,520	At Cost	At Cost	At Cost	At Cost
4-inch (Compound)	\$1,230	\$3,245	\$4,475	At Cost	At Cost	At Cost	At Cost
6-inch (Turbine)	\$1,730	\$4,545	\$6,275	At Cost	At Cost	At Cost	At Cost
6-inch (Compound)	\$1,770	\$6,280	\$8,050	At Cost	At Cost	At Cost	At Cost
Over 6-inch	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost

¹ Service line and meter installation charges are refundable advances.

² Soil in the LPSC-W service area is generally soft dig and the terrain is flat with typical subdivision lot sizes.

II. Not Used and Useful Plant Items

Based on its field inspection, Staff determined that the plant items in Table 6 are not used and useful.

Table 6 Not Used and Useful Plant Items

year	Amount (\$)	NARUC Account (LPSC's)	Reasons
2011	6,000.00	303 (Land & Land Right)	Two parcels are for future well development
2011	6,156.24	304 (Structure & Improvement)	Work done for LPSC-WW Palm Valley WWTP effluent deep well injection (currently effluent is disposed of via reuse permits)

III. Plant Items Included In Previous Rate Case

Based on its field inspection, Staff determined that the plant items in Table 7 had been included in the last rate case, even though they were reported as expenses incurred in 2011.

Table 7 Plant Items included in 2009 Rate Case

year	Amount (\$)	NARUC Account (LPSC's)	Reasons
2011	6,000.00	303 (Land & Land Right)	Two parcels are for future well development
2011	6,156.24	304 (Structure & Improvement)	Work done for LPSC-WW Palm Valley WWTP effluent deep well injection (currently effluent is disposed of via reuse permits)
2011	26,550.00	304 (Structure & Improvement)	The plant item is used and useful prior to 2009. The expenses were for storage tank in 2007 that had been included in 2009 rate case.
	19,924.00	304 (Structure & Improvement)	The plant item is used and useful prior to 2009. The expenses were for storage tank in 2006 that had been included in 2009 rate case.
	125,378.25	304 (Structure & Improvement)	The plant item is used and useful prior to 2009. The expenses were for storage tank in 2006 that had been included in 2009 rate case.
	42,812.67	304 (Structure & Improvement)	The plant item is used and useful prior to 2009. The expenses were for storage tank in 2006 that had been included in 2009 rate case.
	57,406.79	304 (Structure & Improvement)	The plant item is used and useful prior to 2009. The expenses were for storage tank in 2007 that had been included in 2009 rate case.

IV. Reclassification

The expenses for the following plant items in Table 8 should be reclassified for accounting purposes. See Company's Response to Staff Data Request #DH6.1 for confirmation.

Table 8 Reclassification

Year	Amounts (\$)	NARUC Acct (LPSC's)	NARUC Acct (Staff Recommended)	Reasons
2009	5,852.95	304 (Structure & Improvement)	307 (Well & Springs)	Expenses were for Well #AL6 that does not exist.
2009	5,245.00	304 (Structure & Improvement)	307 (Well & Springs)	Expenses were for Well #AL6 that does not exist.
2009	42,154.35	304 (Structure & Improvement)	307 (Well & Springs)	Plant item was for Well 34C
2009	41,625	304 (Structure & Improvement)	320.1 (Water Treatment Plant)	It was for Town Well Arsenic Treatment Plant
2009	141,220.76	304 (Structure & Improvement)	320.1 (Water Treatment Plant)	It was for Town Well Arsenic Treatment Plant
2009	85,478.32	304 (Structure & Improvement)	320.1 (Water Treatment Plant)	It was for Town Well Arsenic Treatment Plant
2009	648,623.90	304 (Structure & Improvement)	330.1 (Storage Tank)	Plant item was for Airline Reservoir
2009	7,995.00	304 (Structure & Improvement)	340.1 (Computer & Software)	Plant item is CAD software for designing water system
2009	15,742.00	304 (Structure & Improvement)	330.1 (Storage Tank)	Painting two 12" x 13" tanks
2009	12,667.5	304 (Structure & Improvement)	307 (Well & Springs)	Replace well pump
2009	10,851.37	304 (Structure & Improvement)	311 (Pumping Equipment)	Plant items is for Well #5 well pump & VFD
2009	7,000.00	304 (Structure & Improvement)	320.1 (Water Treatment Plant)	Painting for Vessel #C & D in Town Well Arsenic Treatment Plant
2009	12,491.86	304 (Structure & Improvement)	320.1 (Water Treatment Plant)	Plant item was media for arsenic treatment plant
2010	1,215,221.40	304 (Structure & Improvement)	320.1 (Water Treatment Plant)	Plant item is for Well 20B Arsenic Treatment Plant
2010	20,000.00	304 (Structure & Improvement)	330.1 (Storage Tank)	Plant item was for Airline Reservoir
2010	10,278.35	304 (Structure & Improvement)	311 (Pumping Equipment)	Plant item was well pump in Well #AL4
2010	6,555.27	348 (Other	340 (Office Furniture &	Plant item is a plotter that used in the

Litchfield Park Service Company – Water Division

Docket No. W-01428A-13-0043 (rates)

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		Tangible Plant)	Equipment)	engineering office
2010	133.22	348 (Other Tangible Plant)	311 (Pumping Equipment)	Plant item was pump motor
2010	1,605.00	348 (Other Tangible Plant)	311 (Pumping Equipment)	Plant item was pump
2010	113.62	348 (Other Tangible Plant)	311 (Pumping Equipment)	Plant item was pump motor
2010	1,490.00	348 (Other Tangible Plant)	311 (Pumping Equipment)	Plant item was pump motor
2011	9,031.45	304 (Structure & Improvement)	310 (Power Generator)	Plant item is an on-site generator
2011	6,000.00	304 (Structure & Improvement)	371 (WW-Pumping Equipment)	permit fees from Maricopa Co. Department of Environmental Services for Palm Valley WWTP
2011	6,156.34	304 (Structure & Improvement)		Consultant fee for Palm Valley WWTP
2011	26,550.00	304 (Structure & Improvement)	330.1 (Storage Tank)	Plant item is for Town Well Reservoir
2011	9,079.35	304 (Structure & Improvement)	310 (Power Generator)	Plant item is an on-site generator in Town Well Reservoir
2011	190,924.9	304 (Structure & Improvement)	330.1 (Storage Tank)	Plant items are for Airline Reservoir and its pump station
2011	11,366.86	304 (Structure & Improvement)	311 (Pumping Equipment)	Plant item was well pump in Well #TW1
2011	9,617.30	304 (Structure & Improvement)	311 (Pumping Equipment)	Plant item is a 200-HP pump motor
2011	125,378.25	304 (Structure & Improvement)	320.1 (Water Treatment Plant)	Plant item was for Town Well Arsenic Treatment Plant
2011	42,812.67	304 (Structure & Improvement)	320.1 (Water Treatment Plant)	Plant item was for Town Well Arsenic Treatment Plant
2011	57,406.79	304 (Structure & Improvement)	320.1 (Water Treatment Plant)	Plant item was for Town Well Arsenic Treatment Plant
2011	19,223.00	311 (Pumping Equipment)	307 (Well & Springs)	Plant item was for Town Well #TW6
2011	22,436.48	311 (Pumping Equipment)	307 (Well & Springs)	Plant item was for Town Well #TW1
2011	27,298.36	311 (Pumping Equipment)	307 (Well & Springs)	Plant item was for Well #20B

V. Curtailment Tariff

The Company has an approved Curtailment Tariff on file with the Commission.

VI. Cross Connection or Backflow Prevention Tariff

The Company has an approved Cross Connection & Backflow Prevention Tariff on file with the Commission.

VII. Off-site Hookup Fee (“OHF”) Tariff

The Company has an approved OHF Tariff for water on file with the Commission. The Company proposed several minor modifications to its OHF Tariff. Staff recommends approval of the Company’s proposal to add the words “domestic only” at end of Paragraph A in Section III of the Tariff. Staff also recommends approval of the Company’s request to add Hook-up Fees for meter sizes greater than 6-inch. Staff recommends the Commission approve the attached OHF Tariff which includes these minor modifications (see attachment labeled Figure 7).

VIII. Best Management Practices (“BMP”) Tariffs

After discussions with Staff, the Company has agreed to implement the five BMP tariffs included in the attachment labeled Figure 8. Currently, the Company has five approved BMP Tariffs³ on file with the Commission. With the addition of the five new BMPs, LPSC-W will have a total of ten water conservation measures. Staff recommends that LPSC-W file the five BMP tariffs included in Figure 8 with Docket Control, as a compliance item in this docket, within 45 days of the effective date of the decision in this proceeding.

IX. System Improvement Benefits (“SIB”) Mechanism

The Company is seeking a SIB mechanism to address necessary distribution system infrastructure replacements and improvements to service existing customers. The proposed SIB includes an area approximately one square mile in size within the City (see Figure 1). As a supplement to its application, LPSC-W submitted the Litchfield Park Facilities Assessment Report (“Report”)⁴ supporting the need for the proposed five year infrastructure replacements and improvements. The Report identifies the most critical areas, estimates the quantity of distribution mains, fire hydrants, meters and service lines that need to be replaced, and estimates the associated replacement costs. In addition, the Report included a Table 7 (equivalent to Table

3 The Company’s current list of approved BMPs include (1) BMP 2.2 (Youth Conservation Education Program Tariff); (2) BMP 3.8 (Water Waste Investigations and Information Tariff); (3) BMP 4.1 (Leak Detection Program Tariff); (4) BMP 4.2 (Meter Repair and/or Replacement Tariff); and (5) BMP 5.8 (Landscape Watering Restrictions Tariff).

4 According to the Company the distribution system in the SIB area is reaching the end of its useful service life and replacing the water distribution system at the same time the sewer collection system is replaced will be much more cost effective. The Company expects that it would incur increased costs from the City for replacing the distribution plant later on in a piecemeal fashion where the City streets must be cut multiple times over a short period of time (the City does not want LPSC tearing up the same street multiple times for pipe replacement).

I in Decision No. 73736) of SIB-eligible projects and related costs, and Tables 8 and 9 that lists annual estimated project costs by NARUC account.

A summary of the Company's proposed 5-year infrastructure replacement plan is tabulated below:

Year	2014		2015		2016		2017		2018		5-Year Total	
Plant	units	Cost (in \$)	units	Cost (in \$)	units	Cost (in \$)	units	Cost (in \$)	units	Cost (in \$)	units	Cost (in \$)
Services (NARUC Acct #333)	76	190,000	154	385,000	169	422,500	137	342,500	71	177,500	607	1,517,500
Meters (NARUC Acct #334)	76	47,600	154	96,300	169	105,700	137	85,700	71	44,400	607	379,700
Hydrants (NARUC Acct #335)	13	81,000	38	112,200	38	236,600	37	230,400	13	81,000	119	741,200
Transmission & Mains (NARUC Acct #331)	6,019	637,400	8,687	939,700	18,572	2,253,300	17,976	2,026,400	6,282	665,200	57,536	6,522,000
Total		956,000		1,533,200		3,018,100		2,685,000		968,100		9,160,400

Staff finds the proposed 5-year infrastructure replacement plan at a cost of \$9,160,400 to be reasonable and appropriate. However, no "used and useful" determination of the proposed plant items was made, and no conclusions should be inferred for rate making or rate base purposes in the future.

FIGURE 1

LPSC-W Water Certificate Service Area

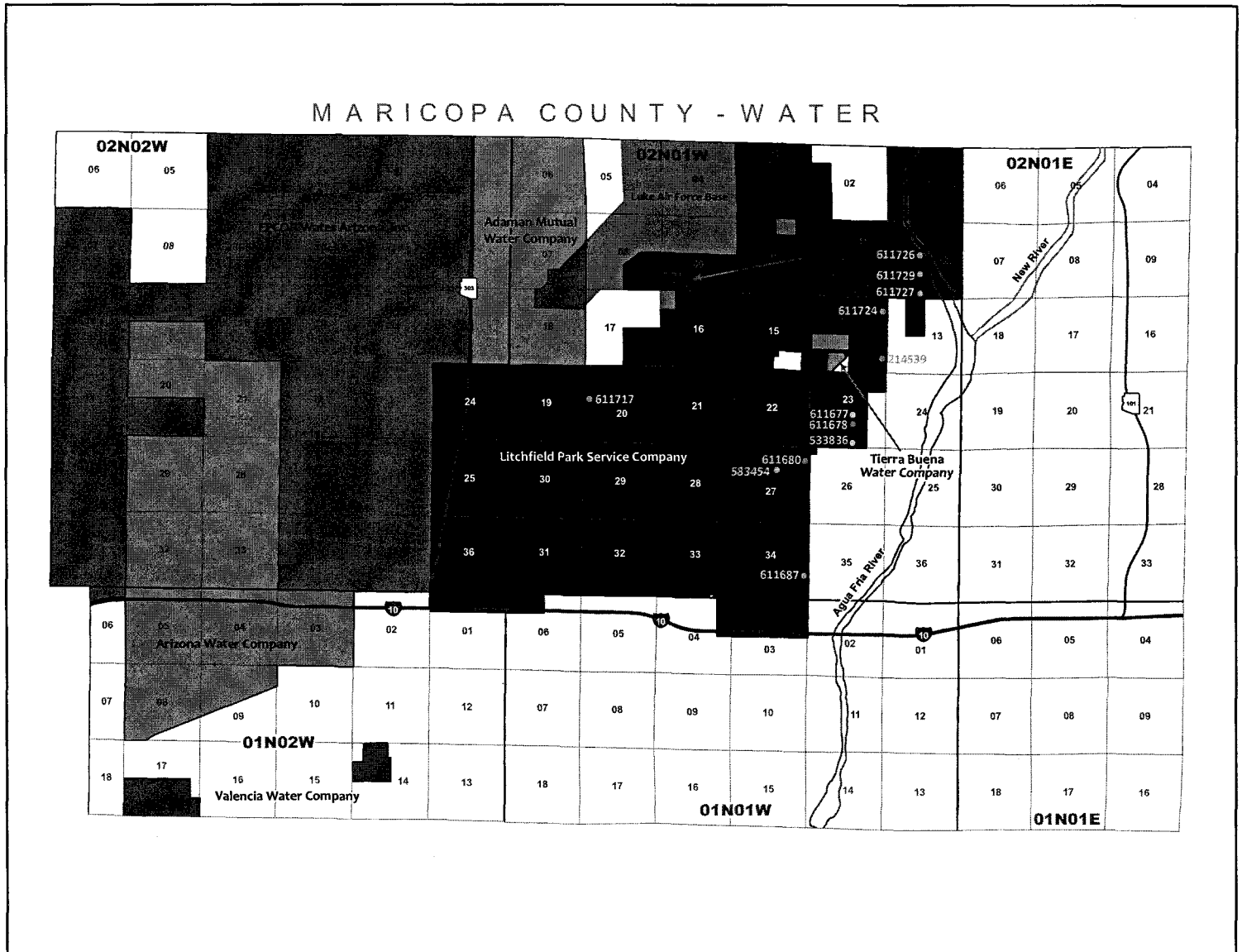


FIGURE 2.

LOCATION OF LPSC-W SERVICE AREA

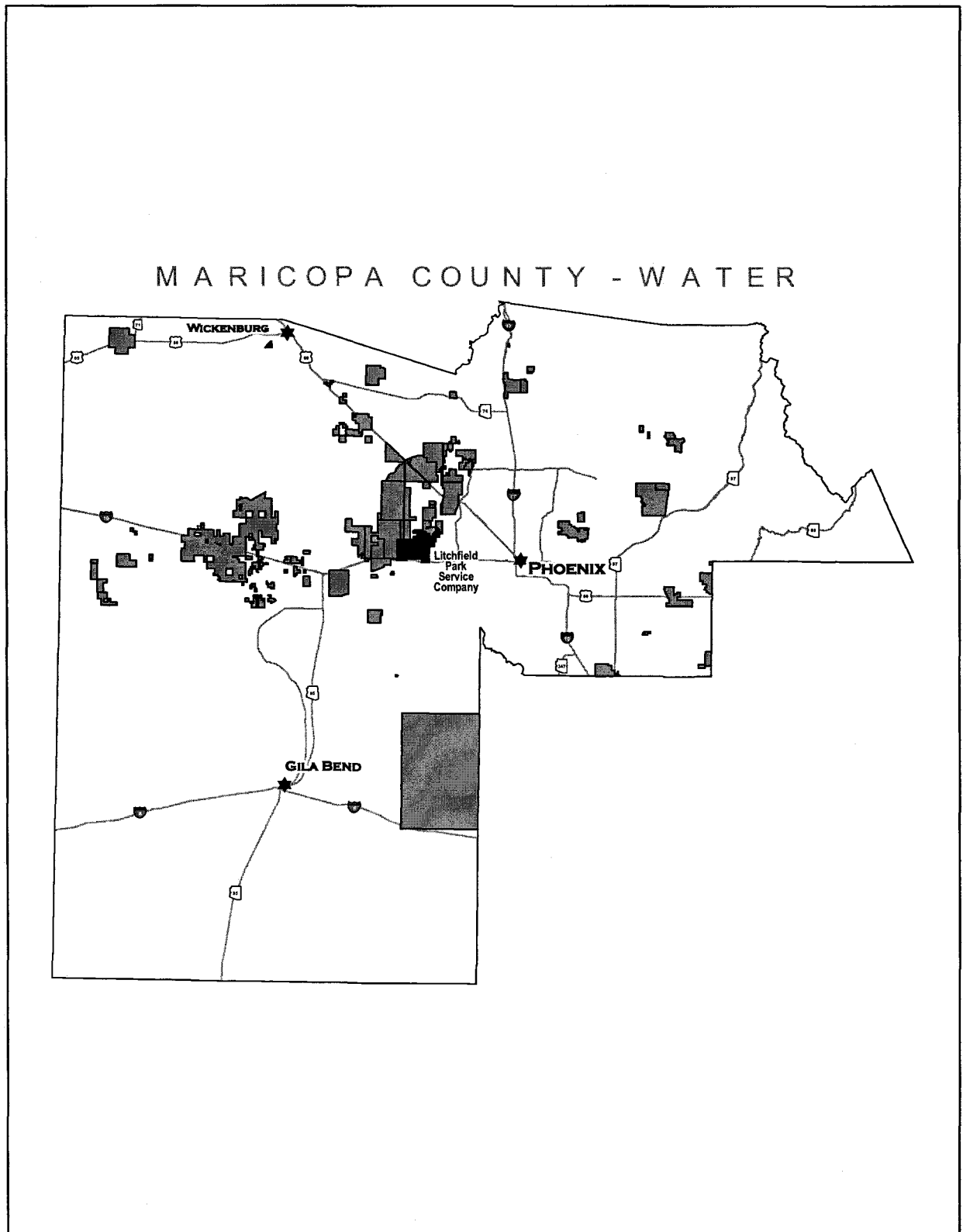


FIGURE 3A SYSTEMATIC DRAWING

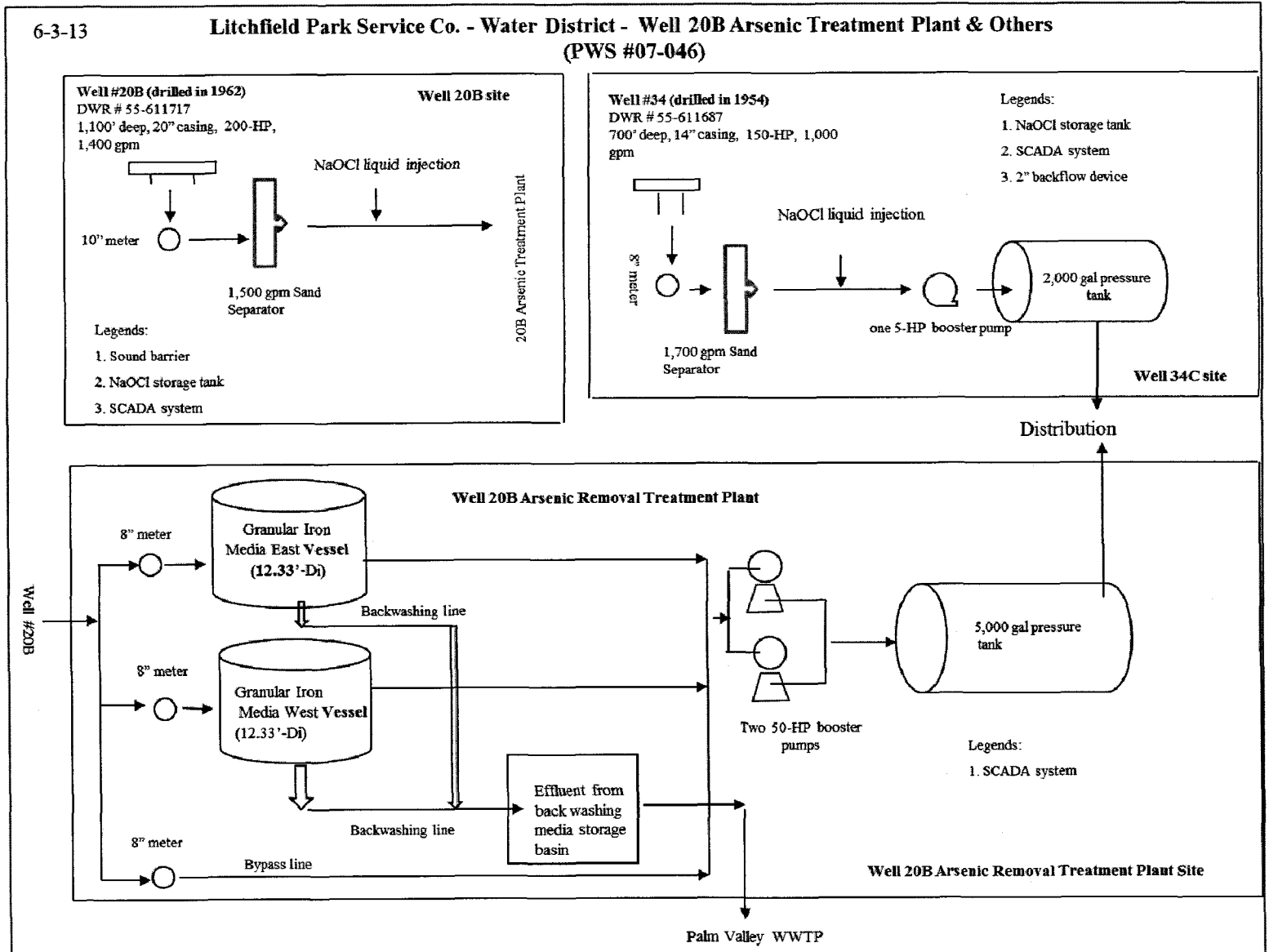


FIGURE 3B SYSTEMATIC DRAWING

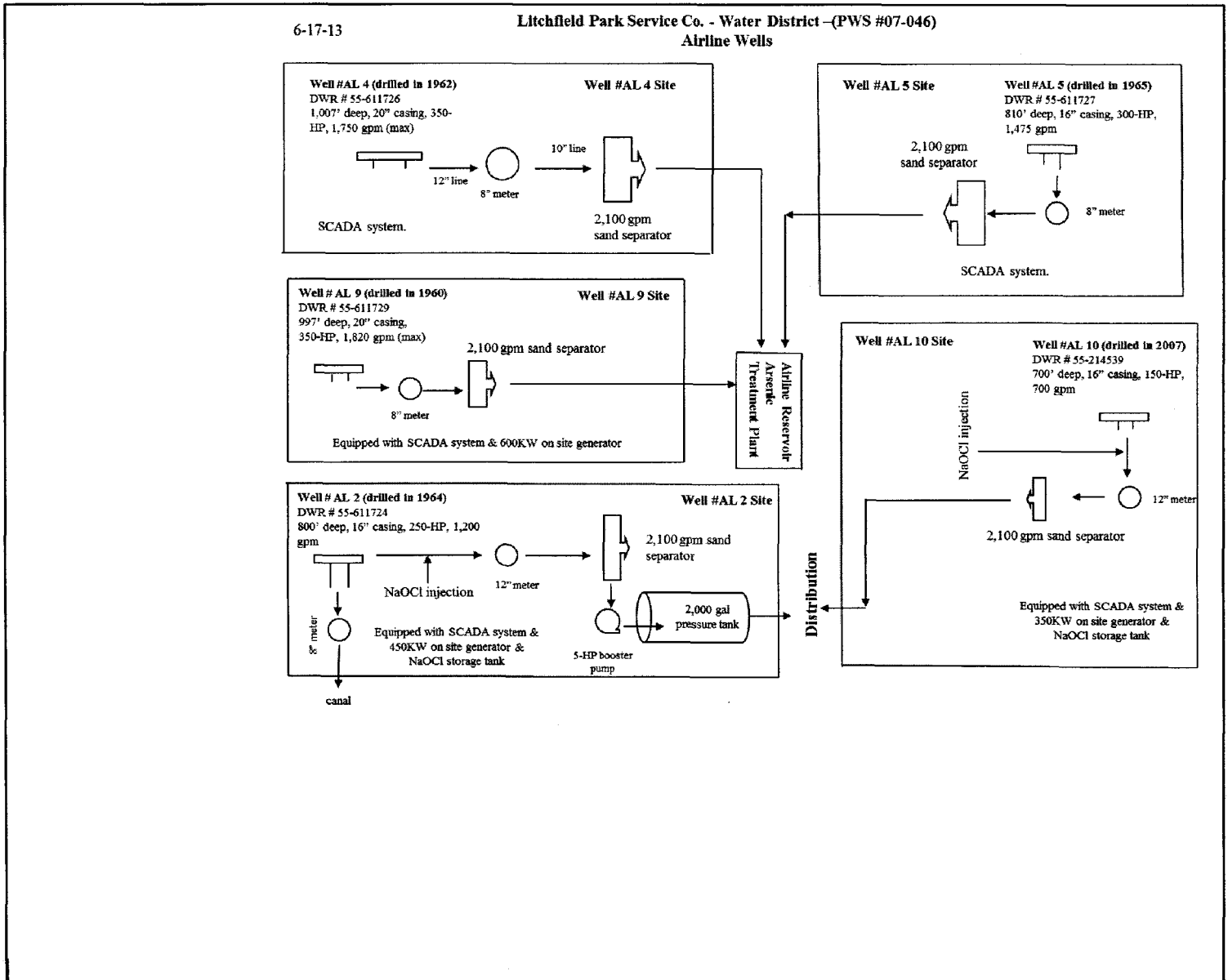


FIGURE 3C SYSTEMATIC DRAWING

6-17-13

Litchfield Park Service Co. - Water District -(PWS #07-046)

Town Wells

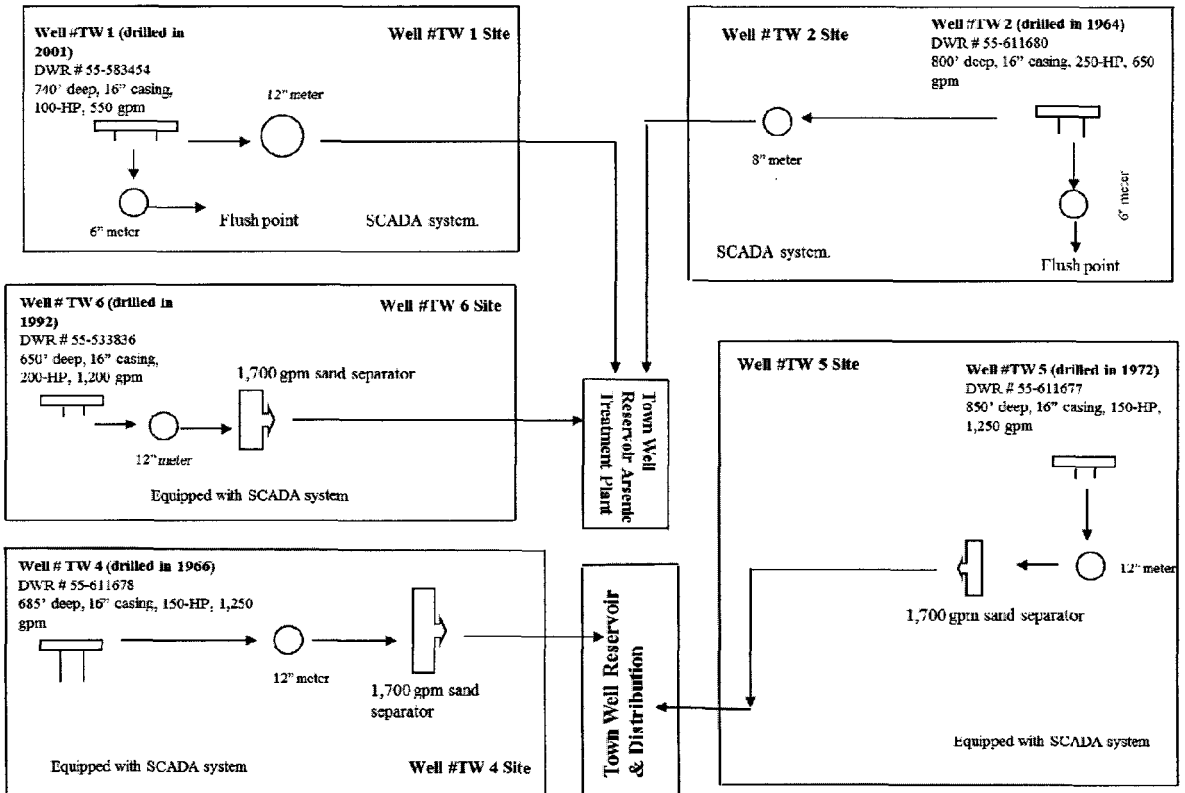


FIGURE 3D SYSTEMATIC DRAWING

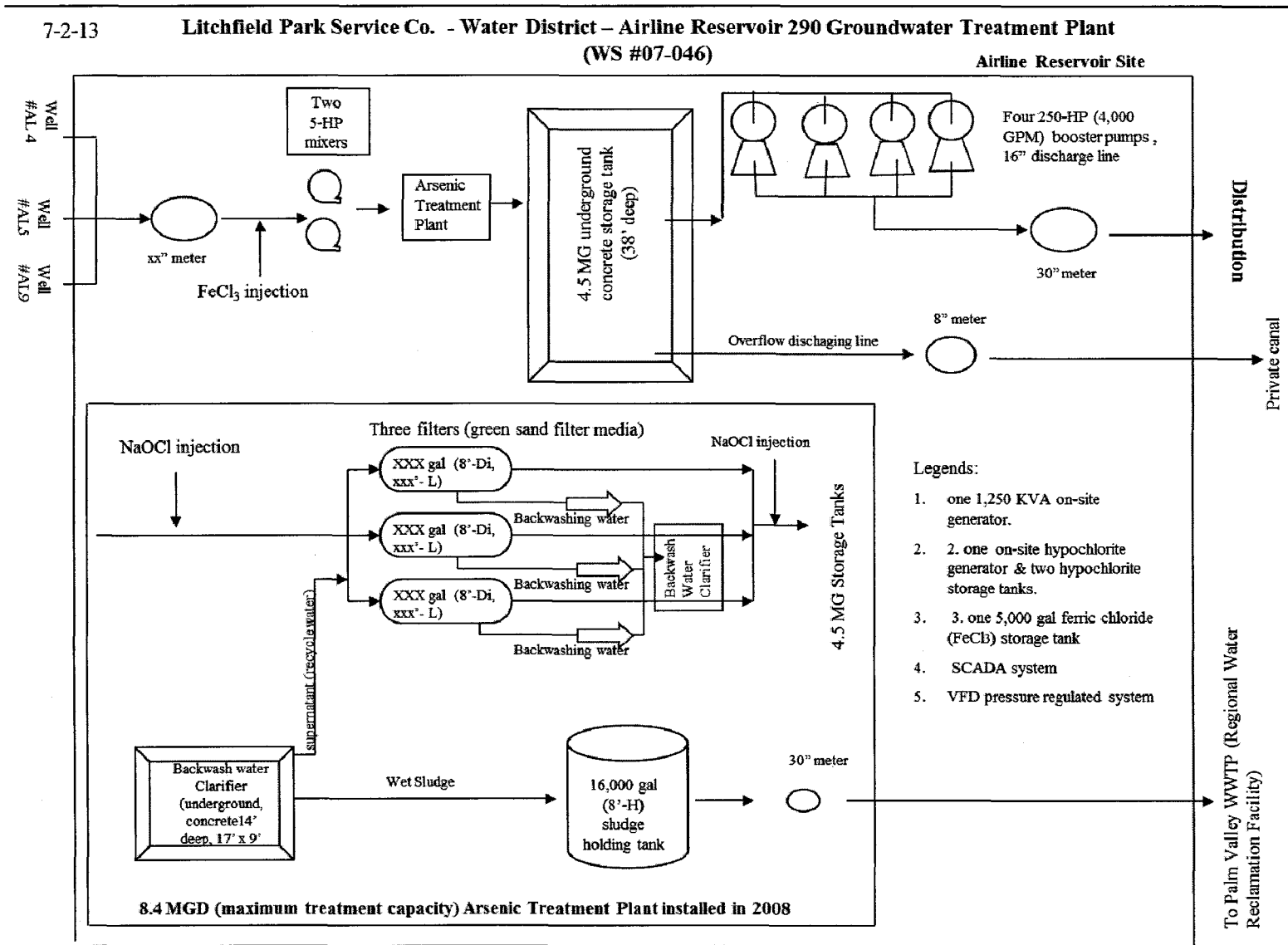


FIGURE 3E SYSTEMATIC DRAWING

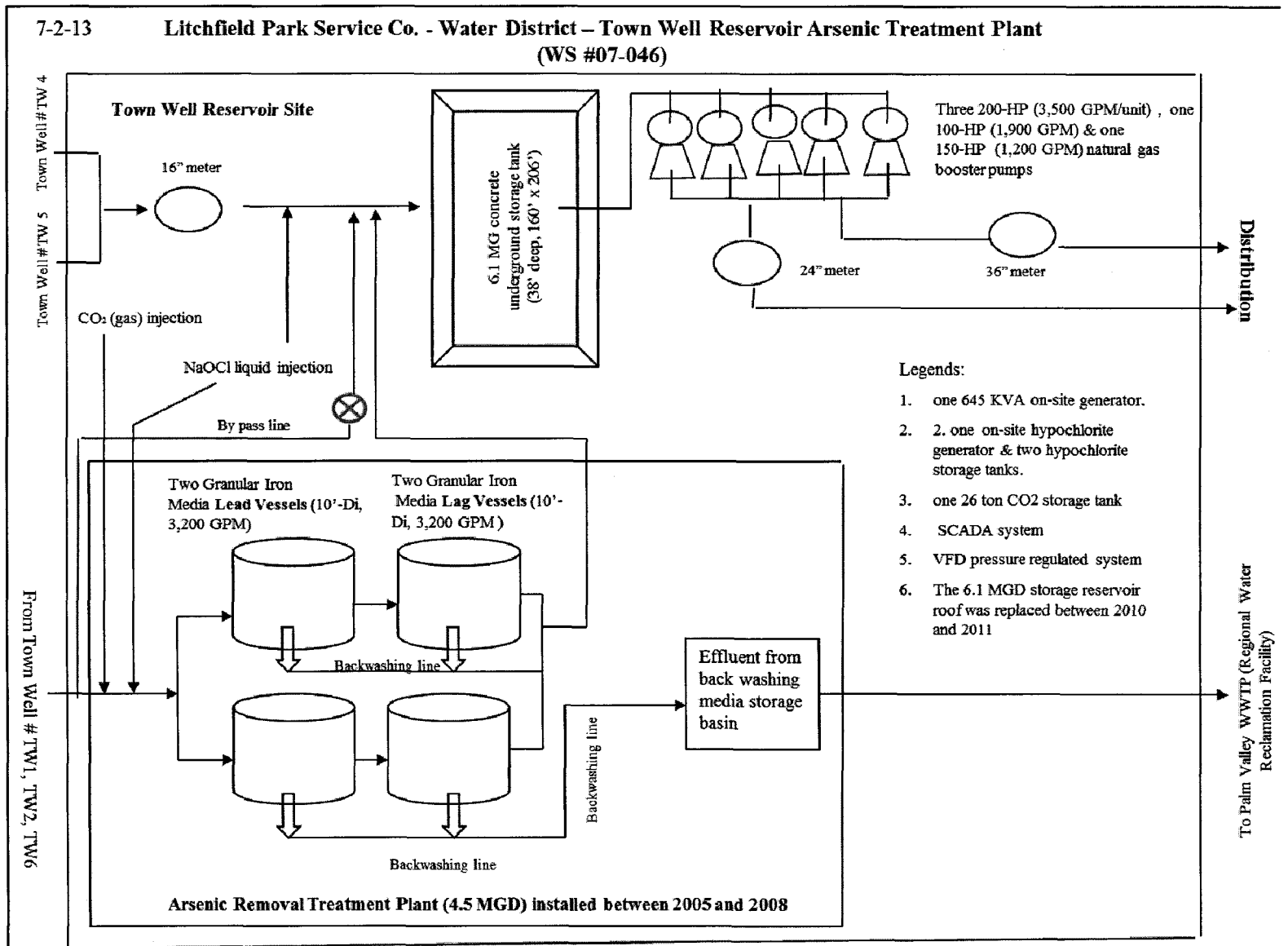


FIGURE 4

WATER USAGE IN LPSC-W WATER SERVICE AREA

**During 2012 Test Year Water Usage In LPSC - Water Division
CC&N Area**

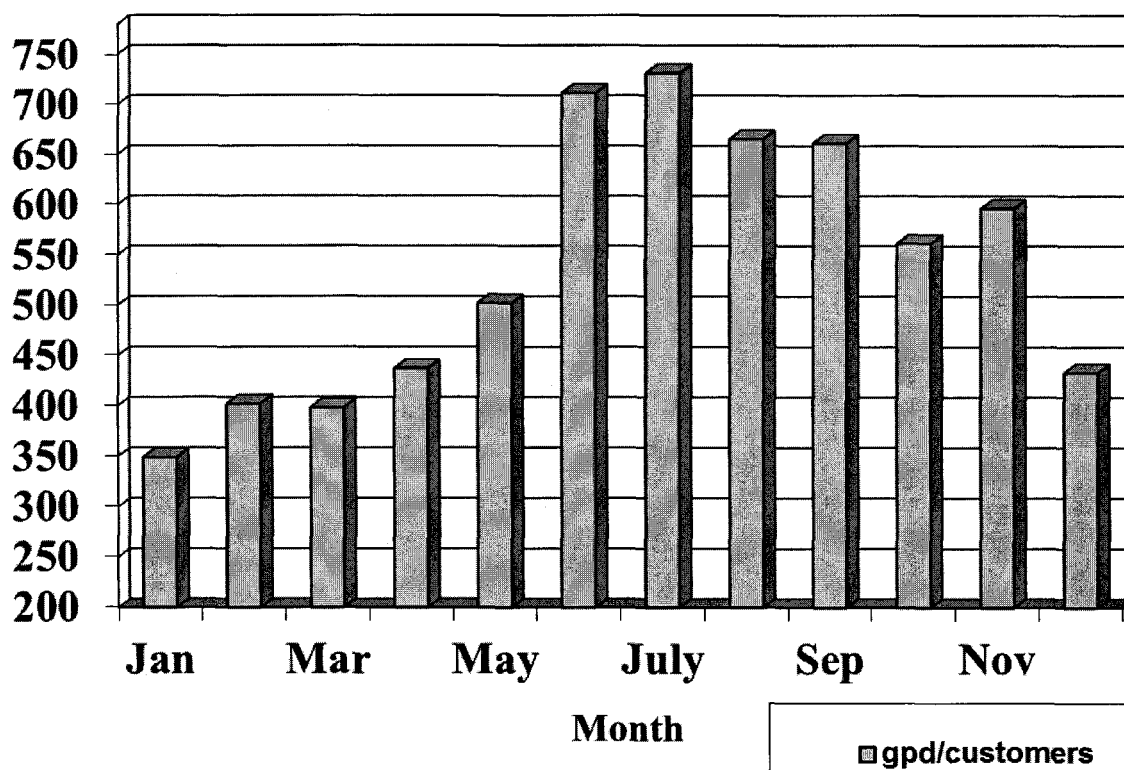


FIGURE 5

ACTUAL AND PROJECTED GROWTH IN LPSC-W WATER SERVICE AREA

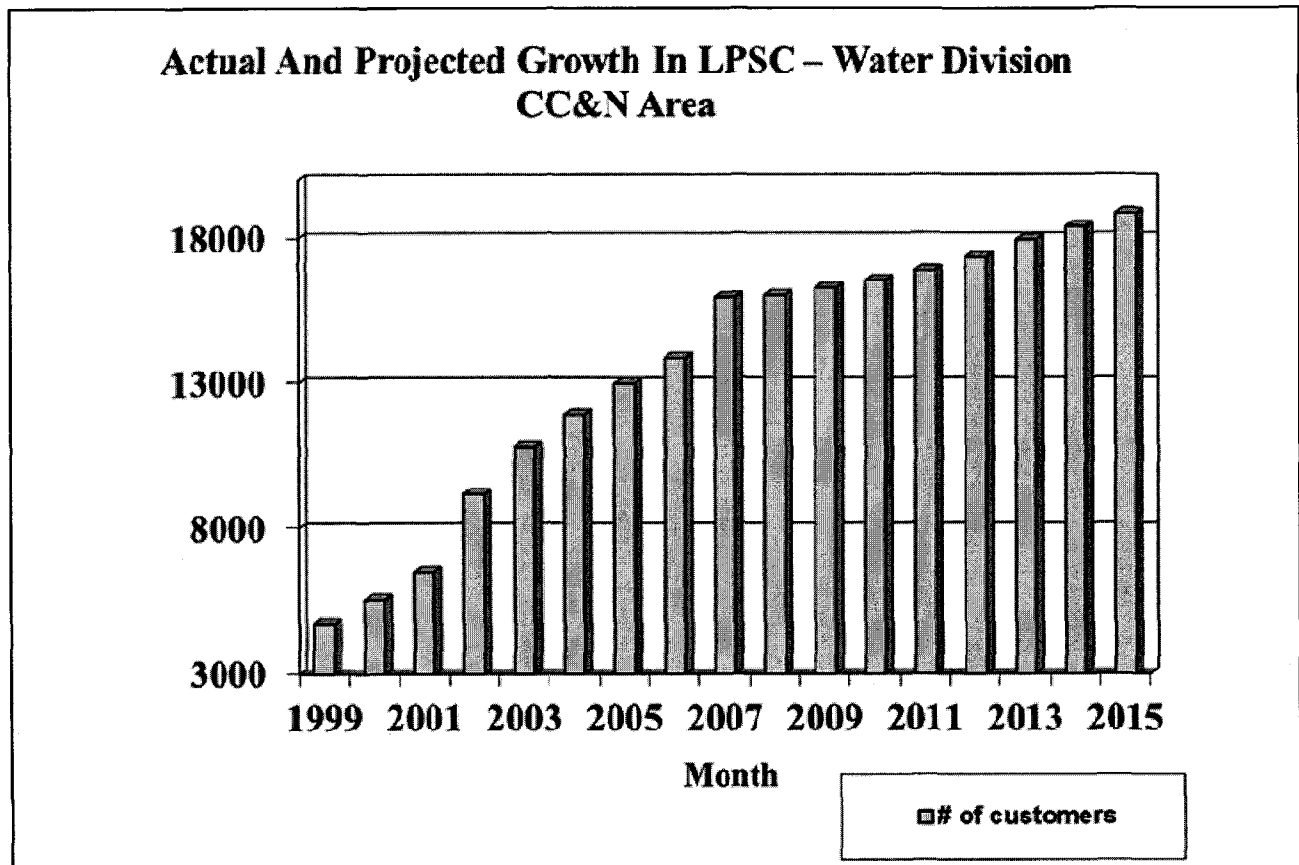


FIGURE 6

Depreciation Rates (LPSC-District)

Acct. No.	Depreciable Plant	Approved Rate (%) (Decision # 72026)	Proposed Rate (%)	Staff Recommended Rate (%)
301	Intangibles	0.00	0.00	0
303	Land & Land Rights	0.00	0.00	0
304	Structures & Improvements	3.33	3.33	3.33
305	Collecting & Impounding Reservoirs	2.50	2.50	2.50
306	Lake, River, Canal Intakes	2.50	2.50	2.50
307	Wells & Springs	3.33	3.33	3.33
308	Infiltration Galleries	6.67	6.67	6.67
309	Raw Water Supply Mains	2.00	2.00	2.00
310	Power Generation Equipment	5.00	5.00	5.00
311	Pumping Equipment	12.50	12.50	12.5
320	Water Treatment Equipment		3.33	
320.1	Water Treatment Plants	3.33	3.33	3.33
320.2	Solution Chemical Feeders	20.00	20.00	20.0
330	Distribution Reservoirs & Standpipes		2.22	
330.1	Storage Tanks	2.22	2.22	2.22
330.2	Pressure Tanks	5.00	5.00	5.00
331	Transmission & Distribution Mains	2.00	2.00	2.00
333	Services	3.33	3.33	3.33
334	Meters	8.33	8.33	8.33
335	Hydrants	2.00	2.00	2.00
336	Backflow Prevention Devices	6.67	6.67	6.67
339	Other Plant & Misc Equipment	6.67	6.67	6.67
340	Office Furniture & Equipment	6.67	6.67	6.67
340.1	Computers & Software	20.00	20.00	20.00
341	Transportation Equipment	20.00	20.00	20.00
342	Stores Equipment	4.00	4.00	4.00
343	Tools, Shop & Garage Equipment	5.00	5.00	5.00
344	Laboratory Equipment	10.00	10.00	10.00
345	Power Operated Equipment	5.00	5.00	5.00
346	Communication Equipment	10.00	10.00	10.00
347	Miscellaneous Equipment	10.00	10.00	10.00
348	Other Tangible Plant	---	10.00	10.00

**FIGURE 7 Revised Off-Site Hookup Fee Tariff for LPSC -W Water
TARIFF SCHEDULE**

UTILITY: **Litchfield Park Service Company - Water**
DOCKET NO. **W-01428A-13-0043**

DECISION NO. _____
EFFECTIVE DATE: _____

WATER HOOK-UP FEE

I. Purpose and Applicability

The purpose of the off-site hook-up fees payable to Litchfield Park Service Company - Water Division (“the Company”) pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities necessary to provide water production, delivery, storage and pressure among all new service connections. These charges are applicable to all new service connections undertaken via Main Extension Agreements or requests for service not requiring a Main Extension Agreement entered into after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company’s establishment of service, as more particularly provided below.

II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-401 of the Arizona Corporation Commission’s (“Commission”) rules and regulations governing water utilities shall apply in interpreting this tariff schedule.

“Applicant” means any party entering into an agreement with Company for the installation of water facilities to serve new service connections, and may include Developers and/or Builders of new residential subdivisions and/or commercial and industrial properties.

“Company” means **Litchfield Park Service Company – Water Division.**

“Main Extension Agreement” means any agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of water facilities necessary to the Company to serve new service connections within a development, or installs such water facilities necessary to serve new service connections and transfers ownership of such water facilities to the Company, which agreement shall require the approval of the Commission pursuant to A.A.C. R-14-2-406, and shall have the same meaning as “Water Facilities Agreement” or “Line Extension Agreement.”

“Off-site Facilities” means wells, storage tanks and related appurtenances necessary for proper operation, including engineering and design costs. Offsite facilities may also include booster pumps, pressure tanks, transmission mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the applicant and will benefit the entire water system.

“Service Connection” means and includes all service connections for single-family residential, commercial, industrial or other uses, regardless of meter size.

III. Water Hook-up Fee

For each new service connection, the Company shall collect an off-site hook-up fee derived from the following table:

OFF-SITE WATER HOOK-UP FEE TABLE		
METER SIZE	SIZE FACTOR	TOTAL FEE
5/8" x 3/4"	1	\$1,800
3/4"	1.5	\$2,700
1"	2.5	\$4,500
1-1/2"	5	\$9,000
2"	8	\$14,400
3"	16	\$28,800
4"	25	\$45,000
6"	50	\$90,000
8"	80	\$144,000
10"	115	\$310,500
12" or larger	215	\$967,500

(A) For “Active Adult” communities with demonstrated age-restricted zoning and/or CCRs providing for age-restricted living, the Total Fee for domestic water use shall be Two-Thirds (2/3) of the Total Fee shown above, based on an ERU factor of 190 gallons per day. All non-domestic service connections shall pay the Hook-up fee per the above table.

IV. Terms and Conditions

(A) Assessment of One Time Off-Site Hook-up Fee: The off-site hook-up fee may be assessed only once per parcel, service connection, or lot within a subdivision (similar to meter and service line installation charge).

(B) Use of Off-Site Hook-up Fee: Off-site hook-up fees may only be used to pay for capital items of Off-site Facilities or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or operational costs. The Company shall record amounts collected under the tariff as CIAC; however, such amounts shall not be deducted from rate base until such amounts have been expended for plant.

(C) Time of Payment:

- 1) For those requiring a Main Extension Agreement: In the event that the person or entity that will be constructing improvements (“Applicant”, “Developer” or “Builder”) is otherwise required to enter into a Main Extension Agreement, whereby the Applicant, Developer or Builder agrees to advance the costs of installing) mains, valves, fittings, hydrants and other on-site improvements in order to extend service in accordance with R-14-2-406(B), payment of the Hook-Up Fees required hereunder shall be made by the Applicant, Developer or Builder no later than within 15 calendar days after receipt of notification from the Company that the Utilities Division of the Arizona Corporation Commission has approved the Main Extension Agreement in accordance with R-14-2-406(M).
- 2) For those connecting to an existing main: In the event that the Applicant, Developer or Builder for service is not required to enter into a Main Extension Agreement, the Hook-Up Fee charges hereunder shall be due and payable at the time the meter and service line installation fee is due and payable.

(D) Off-Site Facilities Construction By Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

(E) Failure to Pay Charges; Delinquent Payments: The Company will not be obligated to make an advance commitment to provide or actually provide water service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will the Company set a meter or otherwise allow service to be established if the entire amount of any payment due hereunder has not been paid.

(F) Large Subdivision Projects: In the event that the Applicant, Developer or Builder is engaged in the development of a residential subdivision containing more than 150 lots, the Company may, in its discretion, agree to payment of off-site hook-up fees in installments. Such installments may be based on the residential subdivision development’s phasing, and should attempt to equitably apportion the payment of charges hereunder based on the Applicant’s, Developer’s or Builder’s construction schedule and water service requirements. In the alternative, the Applicant, Developer, or Builder shall post an irrevocable letter of credit in favor of the Company in a commercially reasonable form, which may be drawn by the Company

consistent with the actual or planned construction and hook up schedule for the subdivision and/or development.

(G) Off-Site Hook-Up Fees Non-refundable: The amounts collected by the Company as Hook-Up Fees pursuant to the off-site hook-up fee tariff shall be non-refundable contributions in aid of construction.

(H) Use of Off-Site Hook-Up Fees Received: All funds collected by the Company as off-site hook-up fees shall be deposited into a separate interest bearing trust account and used solely for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities that will benefit the entire water system.

(I) Off-Site Hook-up Fee in Addition to On-site Facilities: The off-site hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Main Extension Agreement.

(J) Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site hook-up fees, or if the off-site hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

(K) Fire Flow Requirements: In the event the applicant for service has fire flow requirements that require additional facilities beyond those facilities whose costs were included in the off-site hook-up fee, and which are contemplated to be constructed using the proceeds of the off-site hook-up Fee, the Company may require the applicant to install such additional facilities as are required to meet those additional fire flow requirements, as a non-refundable contribution, in addition to the off-site hook-up fee.

(L) Status Reporting Requirements to the Commission: The Company shall submit a calendar year Off-Site Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2015, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and a list of all facilities that have been installed with the tariff funds during the 12 month period.

FIGURE 8 Additional Five Best Management Practices (“BMP”) Tariffs for LPSC -W

Company: _Liberty Utilities (Litchfield Park Water & Sewer) Corp._ Decision No.: ____TBD____

Phone: _623.935.9367_____

Effective Date: ____TBD____

Special Events/Programs and Community Presentations Tariff – BMP 1.2

PURPOSE

A program for the Company to give presentations and/or display and make available water conservation information and related material at community and special events (Modified Non-Per Capita Conservation Program BMP Category 1: Public Awareness/Public Relations 1.2: Special Events/Programs and Community Presentations).

REQUIREMENTS

The requirements of this tariff are governed by Rules of the Arizona Corporation Commission and were adapted from the Arizona Department of Water Resources' Required Public Education Program and Best Management Practices in the Modified Non-Per Capita Conservation Program.

1. The Company shall attend and staff at least three events per year in which the Company shall remind customers of the importance of water conservation measures. Events may include home and garden shows, art shows, community celebrations, environmental shows etc.
2. Information shall include water saving tips, home preparation recommendations for water systems/pipes, landscape maintenance issues for summer and winter, Xeriscape information, youth education materials and any additional pertinent topics.
3. The Company shall keep a record of the following information and make it available to the Commission upon request.
 - a. A description of each special event and the date.
 - b. The number of customers reached (or an estimate).
 - c. A description of the written water conservation material provided free to customers.
 - d. Costs of the Special Events/Programs and Community Presentations implementation.

Company: _Liberty Utilities (Litchfield Park Water & Sewer) Corp._ Decision No.: ____TBD____

Phone: _623.935.9367_____

Effective Date: ____TBD____

Landscape Consultation (Residential and/or Non-residential)

Tariff – BMP 3.2

PURPOSE

A program for the Company to promote water conservation by providing landscape consultation services to residential and non-residential customers (Modified Non-Per Capita Conservation Program BMP Category 3: Outreach Services 3.2: Landscape Consultations (Residential and/or Non-residential)).

REQUIREMENTS

The requirements of this tariff are governed by Rules of the Arizona Corporation Commission and were adapted from the Arizona Department of Water Resources' Required Public Education Program and Best Management Practices in the Modified Non-Per Capita Conservation Program.

1. The Company or its designated provider shall offer landscape consultations to residential and non-residential customers. The consultations shall include, but are not limited to the following:
 - a. Irrigation system evaluation.
 - b. Controller programming/irrigation scheduling.
 - c. Information about low water use plants, trees, and shrubs.
 - d. Information about converting to xeriscape/turf conversion possibilities.
 - e. Information about related programs (i.e., rebates for turf removal/ converting to xeriscape) if available will be offered during the consultation.
 - f. As part of the consultation, and if requested to do so by the customer, the Company shall confirm the accuracy of the customer meter (applicable meter testing fees shall apply).
2. During the consultation, the Company or its designated provider shall provide either on-site written suggestions or on-site verbal suggestions with written follow-up.
3. The Company shall keep a record of the following information and make it available to the Commission upon request.
 - a. A description of the landscape consultation information provided to customers.
 - b. The number of landscape consultations provided to customers.
 - c. Costs of the Landscape Consultation Program.

Company: _Liberty Utilities (Litchfield Park Water & Sewer) Corp._ Decision No.: ____TBD____

Phone: _623.935.9367_____

Effective Date: ____TBD____

Customer High Water Use Inquiry Resolution Tariff – BMP 3.6

PURPOSE

A program for the Company to assist its customers with their high water-use inquiries and complaints (Modified Non-Per Capita Conservation Program BMP Category 3: Outreach Services 3.6: Customer High Water Use Inquiry Resolution).

REQUIREMENTS

The requirements of this tariff are governed by Rules of the Arizona Corporation Commission and were adapted from the Arizona Department of Water Resources' Required Public Education Program and Best Management Practices in the Modified Non-Per Capita Conservation Program.

1. The Company shall handle high water use inquiries as calls are received.
2. Calls shall be taken by a customer service representative who has been trained on typical causes of high water consumption as well as leak detection procedures that customers can perform themselves.
3. Upon request by the customer or when the Company determines it is warranted, a trained Field Technician shall be sent to the customer's residence to conduct a leak detection inspection and provide the customer with water conservation measures. The leak detection inspection may consist of a meter read check for flow verification. If the on-site inspection is requested by the customer, the Commission approved meter re-read tariff fee shall apply.
4. The Company shall follow up in some way on every customer inquiry or complaint and keep a record of inquiries and follow-up activities.

Company: Liberty Utilities (Litchfield Park Water & Sewer) Corp. Decision No.: TBD

Phone: 623.935.9367

Effective Date: TBD

Customer High Water Use Notification Tariff – BMP 3.7

PURPOSE

A program for the Company to monitor and notify customers when water use seems to be abnormally high and provide information that could benefit those customers and promote water conservation (Modified Non-Per Capita Conservation Program BMP Category 3: Outreach Services Program 3.7: Customer High Water Use Notification).

REQUIREMENTS

The requirements of this tariff are governed by Rules of the Arizona Corporation Commission and were adapted from the Arizona Department of Water Resources' Required Public Education Program and Best Management Practices in the Modified Non-Per Capita Conservation Program.

1. The Company shall track water usage for each customer and notify the customer if water use seems excessive for that particular billing for that time of the year.
2. The Company shall identify customers with high consumption and investigate each instance to determine the possible cause.
3. The Company shall contact the high water use customers via telephone, email, by mail or in person. The Company shall contact the customer as soon as practical in order to minimize the possible loss of water. The customer will not be required to do anything to receive this notification.
4. In the notification the Company shall explain some of the most common water usage problems and common solutions and points of contact for dealing with the issues.
5. In the notification, the customer will be reminded of at least the following water-saving precautions:
 - a. Check for leaks, running toilets, or valves or flappers that need to be replaced.
 - b. Check landscape watering system valves periodically for leaks and keep sprinkler heads in good shape.
 - c. Adjust sprinklers so only the vegetation is watered and not the house, sidewalk, or street, etc.
 - d. Continue water conservation efforts with any pools such as installing covers on pools and spas and checking for leaks around pumps.
6. In the notification, the customer will also be reminded of at least the following ordinary life events that can cause a spike in water usage:
 - a. More people in the home than usual taking baths and showers.
 - b. Doing more loads of laundry than usual.
 - c. Doing a landscape project or starting a new lawn.
 - d. Washing vehicles more often than usual.
7. The Company shall provide water conservation information that could benefit the customer, such as, but not limited to, audit programs, publications, and rebate programs.
8. The Company shall assist the customer in a self-water audit and assist the customer in determining what might be causing the high water usage as well as supply

Company: _Liberty Utilities (Litchfield Park Water & Sewer) Corp._ Decision No.: ____TBD____

Phone: _623.935.9367_____

Effective Date: ____TBD____

customer with information regarding water conservation and landscape watering guidelines. As part of the water audit the Company shall confirm the accuracy of the customer meter if requested to do so by the customer (applicable meter testing fees shall apply).

9. The type of notification, the timing of the notification (i.e., how long after high water use was discovered by the Company), and the criteria used for determining which customers are notified shall be recorded and made available to the Commission upon request.

Company: _____

Decision No.: _____

Phone: _____

Effective Date: _____

WATER SYSTEM TAMPERING TARIFF – BMP 5.2

PURPOSE

The purpose of this tariff is to promote the conservation of groundwater by enabling the Company to bring an action for damages or to enjoin any activity against a person who tampers with the water system.

REQUIREMENTS:

The requirements of this tariff are governed by Rules of the Arizona Corporation Commission, specifically Arizona Administrative Code ("AAC") R14-2-410 and the Arizona Department of Water Resources' Required Public Education Program and Best Management Practices in the Modified Non-Per Capita Conservation Program.

1. In support of the Company's water conservation goals, the Company may bring an action for damages or to enjoin any activity against a person who: (1) makes a connection or reconnection with property owned or used by the Company to provide utility service without the Company's authorization or consent; (2) prevents a Company meter or other device used to determine the charge for utility services from accurately performing its measuring function; (3) tampers with property owned or used by the Company; or (4) uses or receives the Company's services without the authorization or consent of the Company and knows or has reason to know of the unlawful diversion, tampering or connection. If the Company's action is successful, the Company may recover as damages three times the amount of actual damages.
2. Compliance with the provisions of this tariff will be a condition of service.
3. The Company shall provide to all its customers, upon request, a complete copy of this tariff and AAC R14-2-410. The customers shall follow and abide by this tariff.
4. If a customer is connected to the Company water system and the Company discovers that the customer has taken any of the actions listed in No. 1 above, the Company may terminate service per AAC R14-2-410.
5. If a customer believes he/she has been disconnected in error, the customer may contact the Commission's Consumer Services Section at 1-800-222-7000 to initiate an investigation.

Company: Liberty Utilities (Litchfield Park Water & Sewer) Corp. Decision No.: TBD

Phone: 623.935.9367

Effective Date: TBD

WATER SYSTEM TAMPERING TARIFF – BMP 5.2

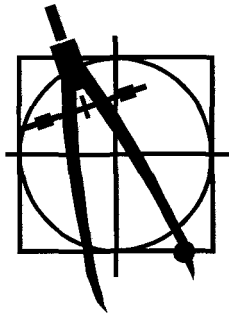
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**Engineering Report
Litchfield Park Service Co. -
Wastewater Division
Prepared By
Dorothy Hains, P. E.
Docket Nos. SW-01428A-13-
0042 (Rates)**

September 25, 2013

EXECUTIVE SUMMARY

Recommendations:

1. Arizona Corporation Commission ("ACC" or "Commission") Utilities Division Staff ("Staff") recommends estimated annual water testing costs of \$22,005 for Litchfield Park Service Co. Wastewater Division ("LPSC-WW" or "Company") (See §I for discussion and details.)
2. Staff recommends the depreciation rates by individual National Association of Regulatory Utility Commissioners category, as delineated in Figure 6. (See §J and Figure 6 for a discussion and a tabulation of the recommended rates.)
3. Staff recommends annual sludge testing cost of \$3,410. (See §J of report for discussion and details.)
4. Staff recommends that the plant items listed in Table 6 be reclassified for accounting purposes as indicated. (See §J for discussion and details.)
5. Staff recommends denial of the Company's proposed modification to its existing Off-site Hookup Fee Tariff for wastewater. (See §J of report for discussion and details.)

Conclusions:

1. A check of the Commission's Compliance Section database dated June 6, 2013, indicated that LPSC WW had no ACC delinquent compliance items. (See §G of report for discussion and details.)
2. In a Compliance Status Report dated April 3, 2013, Arizona Department of Environmental Quality ("ADEQ") reported that LPSC's Palm Valley Water Reclamation Facility ("WRF") was in compliance with ADEQ regulations. (See §F of report for discussion and details.)

3. The Palm Valley WRF has adequate treatment capacity to serve the present customer base and reasonable growth. (See §D of report for discussion and details.)
4. The LPSC-WW Equalization Basin Rehabilitation Project is not used and useful. (See §J of report for discussion and details.)
5. All expenses and capital improvement costs related to future Sarival Wastewater Treatment Plant and future final effluent recharge feasibility study are not used and useful to LPSC-WW provision of service. (See §J for discussion and details.)
6. The proposed 5-year infrastructure replacement plan at a cost of \$10,337,600 is reasonable and appropriate. However, no "used and useful" determination of the proposed plant items was made, and no conclusions should be inferred for rate making or rate base purposes in the future. (See §J for discussion and details.)

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ENGINEERING REPORT
LITCHFIELD PARK SERVICE WATER COMPANY - WASTEWATER DIVISION
DOCKET NO. W-01428A-13-0042 (RATES)

A. PURPOSE OF REPORT

This report was prepared in response to the application filed by Litchfield Park Service Company - Wastewater Division ("LPSC-WW") with the Arizona Corporation Commission ("ACC" or "the Commission") to increase its wastewater rates. The ACC Utilities Division Staff ("Staff") engineering review and analysis of the subject application is presented in this report.

An inspection of the LPSC's wastewater system was conducted by Dorothy Hains, Staff Engineer, accompanied by Jeff Michlik (Staff Accountant), Company Representative, Chris Krygier (Manager), Matthew Garlick (Director), Clint Arndt (Manager), Brian Hamrick, P.E. (Project Manager) on June 19, 2013 and September 5, 2013.

B. LOCATION OF THE LPSC-WW

LPSC-WW is located in the west Phoenix Valley and provides sewer service to communities within the City of Litchfield Park ("City"), City of Goodyear, City of Avondale, and some unincorporated areas of Maricopa County. Figure 1 shows the location of LPSC-WW within Maricopa County and Figure 2 shows the approximate 21 square-miles of LPSC's wastewater certificated area.

C. DESCRIPTION OF SYSTEM

LPSC -WW operates its Palm Valley Water Reclamation Facility ("WRF"), two lift stations ("LS") and a collection system. Palm Valley WRF, is an enclosed treatment facility with two different odor control systems to eliminate odor problems. LPSC - WW expanded Palm Valley WRF treatment capacity from 4.1 million gallon per day ("MGD") to 5.1 MGD during 2012 and 2013. Palm Valley WRF consists of raw sewage inflow LS, headworks, grit removal, equalization ("EQ") basin, three sequential batch reactors ("SBR"), four tertiary disk filters, and seven UV disinfection trains and a backup disinfection system of chlorination/dechlorination unit. The headworks, raw sewerage LS and grit removal have been out of service due to rehabilitation of EQ basin. A temporary bypass of the grit and EQ basin was installed until the rehabilitation is completed. LPSC-WW uses a Supervisory Control and Data Acquisition ("SCADA") system to communicate and control each Palm Valley WRF treatment process step.

Final treated effluent is permitted for effluent reuse by Arizona Department of Environmental Quality ("ADEQ") via Arizona Aquifer Protection ("APP") Permit (Permit No. 47746 and 53068) and Reuse Permits. LPSC-WW disposes of final effluent on different reuse sites such as farm lands, golf courses and parks throughout its service area. ADEQ also allows LPSC-WW to dispose of its final treated effluent in the Roosevelt Irrigation District ("RID") Canal via Arizona Pollutant Discharge Elimination System ("AZPDES") Permit No. 45829. LPSC-WW served approximately 19,500 customers during the test year ending in December 2012. The wastewater

system schematics are shown in Figures 3A and 3B with detailed plant facility descriptions as follows:

Table 1. Plant Description

Water Reclamation Facility

Name	Plant Capacity	Location
Palm Valley WRF	5.1 MGD treatment plant consists of influent lift station, headworks with fine screens and grit removal, anoxic reactor/equalization tank and SBRs for nitrification/denitrification, disc-filters, ultraviolet disinfection system, aerobic sludge digesters, and sludge dewatering centrifuges. Odor control systems, centrifuge, ultraviolet system, effluent pumps, and chlorination/dechlorination (backup disinfection unit)	14222 West McDowell Road, Goodyear, Arizona

Lift Station (“LS”) Facilities

	Connecting to which WWTP	Location	No. Pumps	Pump (in HP)	Capacity (in gallons per minute per pump)	Wet Well Capacity (in gallons)
Casitas Bonitas LS	Palm Valley WRF	6803 N Dysart Rd, Glendale	2	20	350	2,500
Sarival LS	Palm Valley WRF & Goodyear WWTP	1530 N Sarival Ave. Goodyear	2 1	33 40	1,050	30,000

Force Mains

Size (in inches)	Material	Length (in feet)
10	Poly vinyl chloride (“PVC”)	17,550
12	PVC	6,100
8	Ductile Iron Pipe (“DIP”)	3,550
10	DIP	3,925
12	DIP	47
16	DIP	5,200
24	DIP	6,484

Collection Mains

Size (in inches)	Material	Length (in feet)
4	Vitrified Clay Pipe (“VCP”)/DIP/PVC	208,097
6	VCP/DIP/PVC	4,667
8	VCP/DIP/PVC	1,165,969
10	VCP/DIP/PVC	70,196
12	VCP/DIP/PVC	53,213

15	VCP/DIP/PVC	85,886
18	VCP/DIP/PVC	22,180
21	VCP/DIP/PVC	23,016
24	VCP/DIP/PVC	12,188
30	VCP/DIP/PVC	3,663

Manholes & Cleanouts

Type	Quantity
Standard Manhole	4,270
Drop Manhole	61
Cleanouts	172

Services

Size (in inches)	Material	Length (in feet)
4	VCP/DIP/PVC	17,906
6	VCP/DIP/PVC	700
8	VCP/DIP/PVC	2
10	VCP/DIP/PVC	4

D. WASTEWATER FLOW

I. Wastewater Flows

Based on the information provided by LPSC, wastewater flows for the test year ending in December 2012 are presented in Table 2 and Figure 4. For the average daily flows, November 2012 experienced the highest flow of 3,539,533 gallons per day (“GPD”). For the peak day flows, October 2012 had the highest flow when 4,273,000 gallons were treated in one day.

Table 2. Litchfield Park Wastewater Flow In 2012

Month	Number of Connections	Monthly Total Volumes of Treated Wastewater (gallons)	Daily Average Flow (gallons/day)	Peak Day Flow (gallons)	Daily Average Flow (gal/day/customers)
Jan	18,816	103,443,000	3,336,871	3,846,000	177
Feb	18,877	97,923,000	3,497,250	3,933,000	185
Mar	18,906	107,792,000	3,477,161	4,098,000	184
Apr	18,961	100,265,000	3,342,167	3,640,000	176
May	19,001	98,950,000	3,191,935	3,699,000	168
Jun	19,063	94,275,000	3,142,500	3,976,000	165
Jul	19,140	100,140,000	3,230,323	3,906,000	169
Aug	19,202	104,663,000	3,376,226	3,757,000	176
Sep	19,267	96,705,000	3,223,500	3,695,000	167
Oct	19,316	105,392,000	3,399,742	4,273,000	176
Nov	19,355	106,186,000	3,539,533	4,267,000	183
Dec	19,433	108,094,000	3,486,903	3,905,000	179

Average			3,353,676		175
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II. System Analysis

Staff concludes that Palm Valley WRF has adequate treatment capacity to serve the present customer base and reasonable growth.

E. GROWTH PROJECTION

Figure 5 depicts the customer growth using linear regression analysis. The number of service connections was obtained from annual reports submitted to the Commission. At the end of the test year December 2012, the Company had 19,433 customers and it is projected that this system could have approximately 21,537 customers by December 2016. The following table summarizes Staff's projected growth.

Table 3 Actual & Projected Growth in LPSC (Wastewater) Service Area

Year	Nos. of Customers	
1999	4,245	Reported
2000	5,140	Reported
2001	5,964	Reported
2002	8,822	Reported
2003	10,728	Reported
2004	11,817	Reported
2005	12,513	Reported
2006	15,748	Reported
2007	17,661	Reported
2008	17,907	Reported
2009	18,281	Reported
2010	18,536	Reported
2011	18,791	Reported
2012	19,433	Reported
2013	20,043	Estimated
2014	20,541	Estimated
2015	21,039	Estimated
2016	21,537	Estimated

F. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ("ADEQ") COMPLIANCE

In a Compliance Status Report dated April 3, 2013, ADEQ reported that LPSC's Palm Valley WRF was in total compliance with ADEQ regulations.

G. ACC COMPLIANCE

A check of the Commission's Compliance Section database dated June 6, 2013, indicated that LPSC-WW had no ACC delinquent compliance items.

H. WASTEWATER TESTING EXPENSES

LPSC-WW reported its water testing expense at \$57,735 for the test year. Staff has reviewed the Company's reported expense amount and has recalculated these expenses and recommends that Staff water testing expense of \$22,005 (rounded) be adopted for this proceeding.

Based on monitoring requirements in APP Permit No. 47746 and 53068 and AZPDES Permit No. 45829, Table 4 and 4A are the estimated annual testing costs for the LPSC-WW.

Table 4 Water Testing Cost for LPSC-WW (Based On AZPDES Permit # AZ0025712)

Monitoring – Discharge	No. of tests per year ¹	Cost per test (\$)	Company Reported Total Costs	Staff Estimated Annual Cost
Biochemical Oxygen Demand (BOD ₅) – 1/week	52	20 ²	N/A	1,040
Bacteriological – Fecal Coliform (E Coli) – 4/month	48	13.5 ²	N/A	648
Total Suspended Solids (TSS) – 1/week	52	12 ²	N/A	624
pH- 5/week	260	12 ²	N/A	3,120
Oil and grease - quarterly	4	80 ²	N/A	320
Total residual chlorine (TRC)- quarterly	4	13.5 ²	N/A	54
Ammonia (NH ₃) – quarterly	4	24 ²	N/A	96
Nitrate & Nitrite (NO ₃ & NO ₂) - quarterly	4	32 ²	N/A	128
Total Kjeldahl Nitrogen (TKN) -quarterly	4	30 ²	N/A	120
Total Nitrogen – monthly	0	48 ²	N/A	0
Dissolved Oxygen (DO) – 1/year	1	35 ³	N/A	35
Hardness - quarterly	4	18 ²	N/A	72
Phosphorus (P) -quarterly	4	30 ²	N/A	120
Total Dissolved Solids (TDS) - quarterly	4	12 ²	N/A	48
Total Metals (including fluoride & cyanide) - quarterly -	4	271 ²	N/A	1,084
Selected Acid-extractable Compounds – 1/year	1	95 ⁴	N/A	95
Selected Base-neutral Compounds – 1/year	1	365 ⁴	N/A	365
Based on Designated Uses – 1/year	1	365 ⁴	N/A	365
Volatile Organic Compound (VOCs) -	1	225 ³	N/A	225

1/year				
Semi-Volatile Organic Chemicals (SVOC) 1/year	1	2,050 ³	N/A	2,050
Total			N/A	10,609

Note: 1. Total monitoring/sampling frequencies are based on requirements in AZPDES (Permit # AZ0025712).

2. Prices come from Legend Lab

3. Prices come from Aquatic Consulting & Testing, Inc.

4. Prices come from Mohave Environmental Lab.

Table 4A Water Testing Cost for LPSC-WW (Based On APP Permit # P-100310)

Monitoring – Discharge	No. of tests per year ¹	Cost per test (\$)	Company Reported Total Costs	Staff Estimated Annual Cost (\$)
Bacteriological – Fecal Coliform (E Coli) - daily	365	13.5 ²	N/A	4,927.5
Nitrate & Nitrite (NO ₃ & NO ₂) - quarterly	4	32 ²	N/A	128
Total Kjeldahl Nitrogen (TKN) -quarterly	4	30 ²	N/A	120
Total Nitrogen – monthly	12	48 ²	N/A	576
Total Metals (including fluoride & cyanide) - quarterly -	4	271 ²	N/A	1,084
Volatile Organic Compound (VOCs) -2/year	2	225 ³	N/A	450
Semi-Volatile Organic Chemicals (SVOC)-2/year	2	2,050 ³	N/A	4,100
Total			N/A	11,395.5

Note: 1. Total monitoring/sampling frequencies are based on APP (Permit # P-100310).

2. Prices come from Legend Lab

3. Prices come from Aquatic Consulting & Testing, Inc.

4. Prices come from Mohave Environmental Lab.

Total recommended water testing cost is \$22,005 (rounded sum total of Table 4 and Table 4A).

I. DEPRECIATION RATES

Staff has developed typical and customary depreciation rates within the range of anticipated equipment life. These rates are presented in Figure 6, and should be used to calculate the annual depreciation expense for the Company. Staff recommends the depreciation rates by individual National Association of Regulatory Utility Commissioners (“NARUC”) category, as delineated in Figure 6.

J. OTHER ISSUES

I. Plant Not in Use

Based on its field inspection, Staff concludes that the plant related expenses listed in Table 5 below are for future plant not currently used and useful.

Table 5 Not Used and Useful Plant Items

year	Amount (\$)	NARUC Account (LPSC's)	Reasons
2009	3,994.6	353 (Land & Land Right)	Work was for future Sarival WWTP
2009	1,194.2	353 (Land & Land Right)	Work was for future Sarival WWTP
2009	2,619.8	353 (Land & Land Right)	Work was for future Sarival WWTP
2009	3,408.6	353 (Land & Land Right)	Work was for future Sarival WWTP
2011	18,143.77	354 (Structures & Improvements)	Work done by Errol Montgomery & Association for future final effluent recharge feasibility study
2011	22,628.94	354 (Structures & Improvements)	Work done by Errol Montgomery & Association for future final effluent recharge feasibility study
2011	10,592.50	354 (Structures & Improvements)	Work done by Errol Montgomery & Association for future final effluent recharge feasibility study
2011	12,932	354 (Structures & Improvements)	Work done by Errol Montgomery & Association for future final effluent recharge feasibility study
2011	7,700	354 (Structures & Improvements)	Work done by Errol Montgomery & Association for future final effluent recharge feasibility study
2011	41,332	354 (Structures & Improvements)	Work done by Errol Montgomery & Association for future final effluent recharge feasibility study
Total	124,546.4		

II. Reclassification

The plant items listed in Table 6 below should be reclassified for accounting purposes as indicated. Staff's recommendation is based on the Company's response to Staff Data Request #DH11.2.

Table 6 Reclassification

Year	Amounts (\$)	NARUC Acct (LPSC's)	NARUC Acct (Staff Recommended)	Reasons
2009	16,604.5	354 (Structure & Improvement)	380 (Wastewater Treatment & Disposal	Plant item was for Palm Valley WRF upgrade

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			Equipment)	
2009	283,971.1	354 (Structure & Improvement)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2009	38,926.12	354 (Structure & Improvement)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2009	11,210	354 (Structure & Improvement)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2009	20,231.99	354 (Structure & Improvement)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2009	22,264.30	354 (Structure & Improvement)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2009	24,852.40	354 (Structure & Improvement)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2009	5,725	354 (Structure & Improvement)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2009	41,564.37	354 (Structure & Improvement)	361 (Collection Sewer)	Emergency interconnection from Sarival Lift Station to Goodyear WWTP
2009	836.34	380 (Wastewater Treatment & Disposal Equipment))	394 (Lab equipment)	HACH test kit
2009	36,618	380 (Wastewater Treatment & Disposal Equipment))	365 (flow measuring installation)	Installation of inflow flow meter

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2009	5,047.8	389 (Other Plant & Misc. Equipment)	371 (Pumping equipment)	Plant item was a blower.
2009	18,153.75	389 (Other Plant & Misc. Equipment)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2009	9,368.75	389 (Other Plant & Misc. Equipment)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2009	5,074.34	389 (Other Plant & Misc. Equipment)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2009	5,360	389 (Other Plant & Misc. Equipment)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade
2012	25,423	354 (Structure & Improvement)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for Palm Valley WRF upgrade(SBR #3 piping modification)
2012	5,200	354 (Structure & Improvement)	380 (Wastewater Treatment & Disposal Equipment)	Aquifer Protection Permit for Palm Valley WRF upgrading
2012	5,682.42	354 (Structure & Improvement)	371 (Pumping equipment)	Plant item was a 18-HP pump
2012	23,454.67	354 (Structure & Improvement)	371 (Pumping equipment)	Plant item was a 33-HP pump
2012	15,681.39	393 (Tools, Shop & Garage Equipment)	380 (Wastewater Treatment & Disposal Equipment)	Plant item was for filters.
2012	5,684.72	395 (Power Operated Equipment)	371 (Pumping equipment)	Plant item was a 100-HP pump.
2012	15,800	395 (Power Operated Equipment)	371 (Pumping equipment)	Plant item was a blower.

III. Off-site Hookup Fee (“OHF”) Tariff

LPSC has an approved OHF Tariff for wastewater on file with the Commission. LPSC requested that the language in Section IV.C.1. related to, “Time of Payment” be modified. LPSC requested that payment by the Developer be made at the time of execution of the Main Extension Agreement. Staff does not believe this modification is necessary and recommends denial.

VI. Post-Test Year Plant Adjustment

While doing the Palm Valley WRF expansion, the contractor observed that the EQ basin was damaged by hydrogen sulfide corrosion. Maricopa County Department of Environmental Services (“MCDES”) issued a Certificate of Approval To Proceed With Stipulations for EQ Basin Rehabilitation on May 17, 2013. The EQ basin was still down for rehabilitation during Staff’s recent inspection on September 5, 2013. Phase I of the EQ Basin Rehabilitation Project (“Project”) has been completed, Phase II of the Project which includes (1) adding three additional columns; (2) installing carbon filter linear on EQ basin inner surface to prevent from future corrosion; and (3) raising elevations of headwork pipelines by 6-inch is still under construction. LPSC-WW estimates the entire Project should be completed in November 2013. Because the Project is not completed, the EQ basin is not in service. Therefore, the related post-test year plant adjustment is not used and useful at present time. Staff concludes that the LPSC-WW EQ Basin rehabilitation Project is not used and useful at present time.

V. Sludge Testing Cost

During the wastewater treatment process sludge is generated. The sludge cannot be transported and disposed of in any landfill until the sludge is tested and passes the toxicity characteristic leaching procedure (“TCLP”) and hazardous waste tests. LPSC-WW conducts one TCLP test per year and four hazardous waste tests per year. Staff estimates an annual sludge testing fee of \$3,410. Table below details the testing calculation.

Monitoring	No. of tests per year	Cost per sample (\$)	Company Reported Total Costs	Staff Estimated Annual Cost
toxicity characteristic leaching procedure (“TCLP”)– 1/week	1	318 ²	N/A	318
hazardous waste	4	773 ²	N/A	3,092
Total			N/A	3,410

Note: 1. Total monitoring/sampling frequencies are based on LPSC-WW verbal statement.
2. Prices come from Legend Lab.

VI. System Improvement Benefits ("SIB") Mechanism

The Company is seeking a SIB mechanism to address necessary collection system infrastructure replacements and improvements to service existing customers. The proposed SIB includes an area approximately one square mile in size within the City (see Figure 1). As a supplement to its application, LPSC-WW submitted the Litchfield Park Facilities Assessment Report ("Report")¹ supporting the need for the proposed five year infrastructure replacements and improvements. The Report identifies the most critical areas, estimates the quantity of sewer collection lines, manholes and sewer service laterals that need to be replaced, and estimates the associated replacement costs. In addition, the Report included a Table 7 (equivalent to Table I in Decision No. 73736) of SIB-eligible projects and related costs, and Tables 8 and 9 that lists annual estimated project costs by NARUC account.

A summary of the Company's proposed 5-year infrastructure replacement plan is tabulated below:

Year	2014		2015		2016		2017		2018		5-Year Total	
Plant	units	Cost (in \$)	units	Cost (in \$)	units	Cost (in \$)	units	Cost (in \$)	units	Cost (in \$)	units	Cost (in \$)
Services (NARUC Acct #363)	95	46,300	153	68,300	175	78,100	120	52,100	496	213,900	1,039	458,700
Manholes (NARUC Acct #363)	23	91,500	41	177,100	70	253,400	52	182,100	107	363,900	293	1,068,000
Gravity Flow Collection Sewer (NARUC Acct #361)	5,321	688,000	10,029	1,234,900	17,691	2,123,700	15,807	1,972,600	23,049	2,790,700	71,897	8,810,500
Total		825,800		1,480,300		2,455,800		2,206,800		3,368,500		10,337,600

Staff has reviewed the Company's Report. Staff finds the proposed 5-year infrastructure replacement plan at a cost of \$10,337,600 to be reasonable and appropriate. However, no "used and useful" determination of the proposed plant items was made, and no conclusions should be inferred for rate making or rate base purposes in the future.

¹ According to the Company its sewer collection lines, manholes and service laterals in this area have been severely damaged by hydrogen sulfide, a hazardous, corrosive gas commonly discovered in raw sewage.

FIGURE 1
LPSC-WW Certificate Service Area

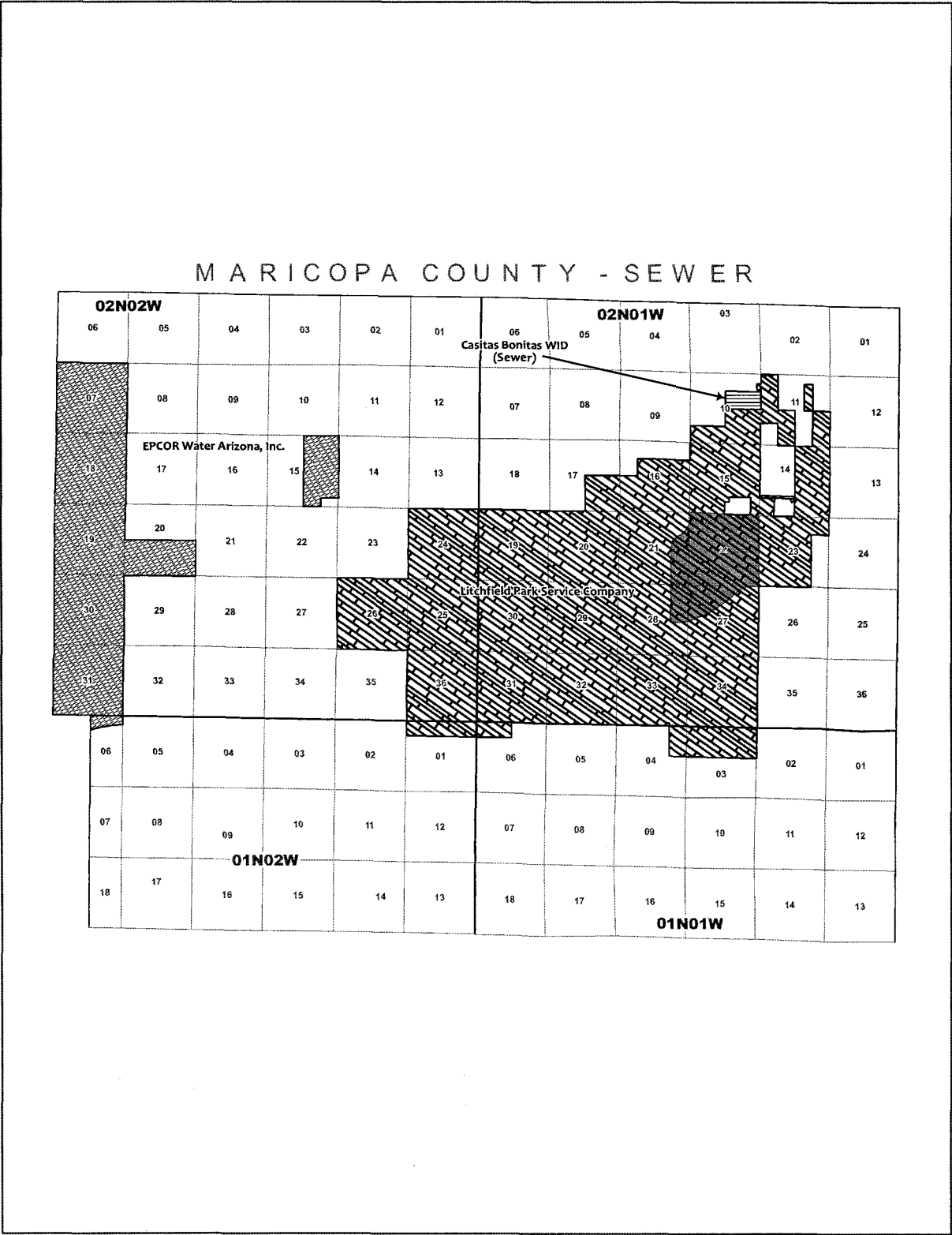


FIGURE 2.

LOCATION OF LPSC-WW SERVICE AREA

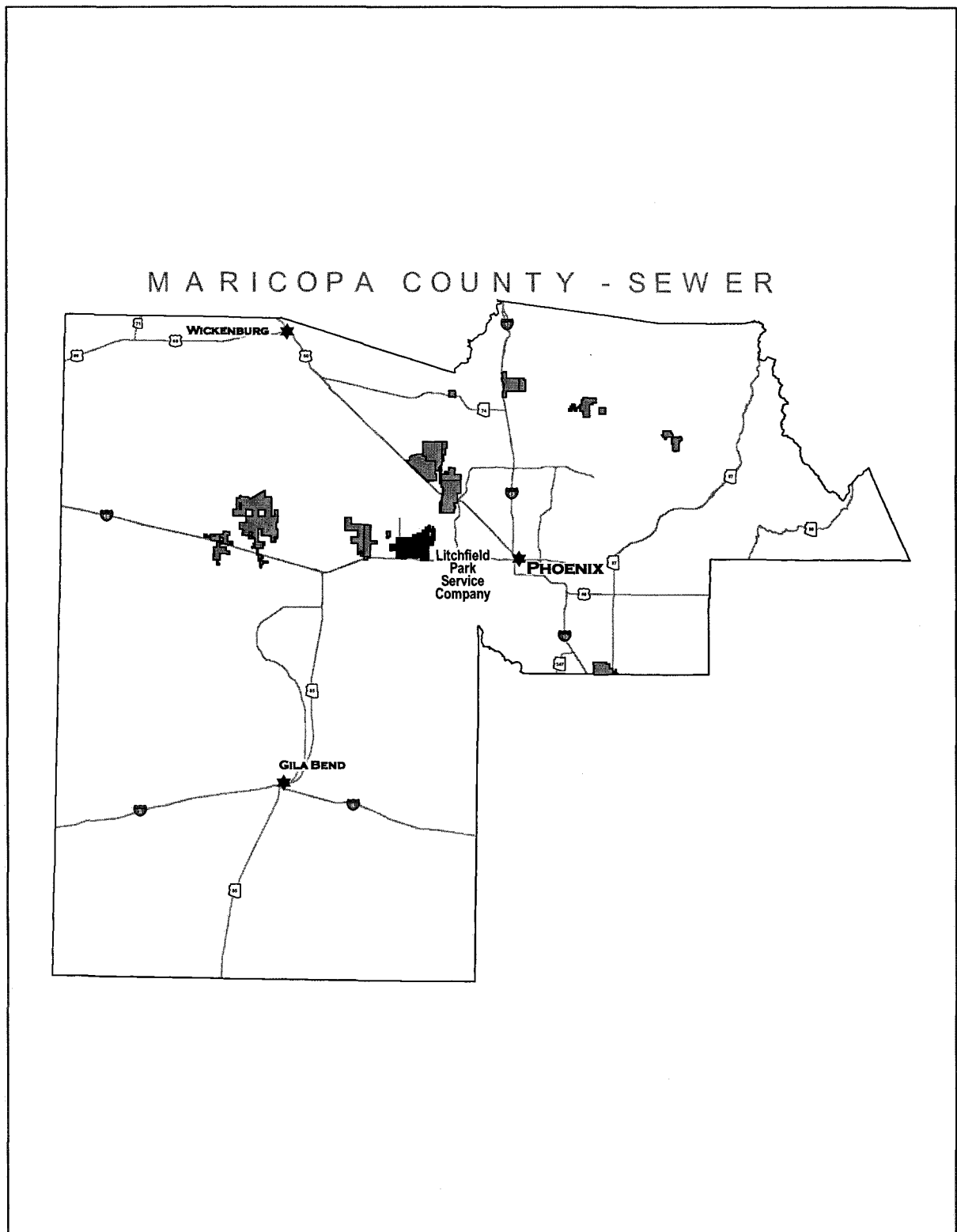


FIGURE 3A SYSTEMATIC DRAWING

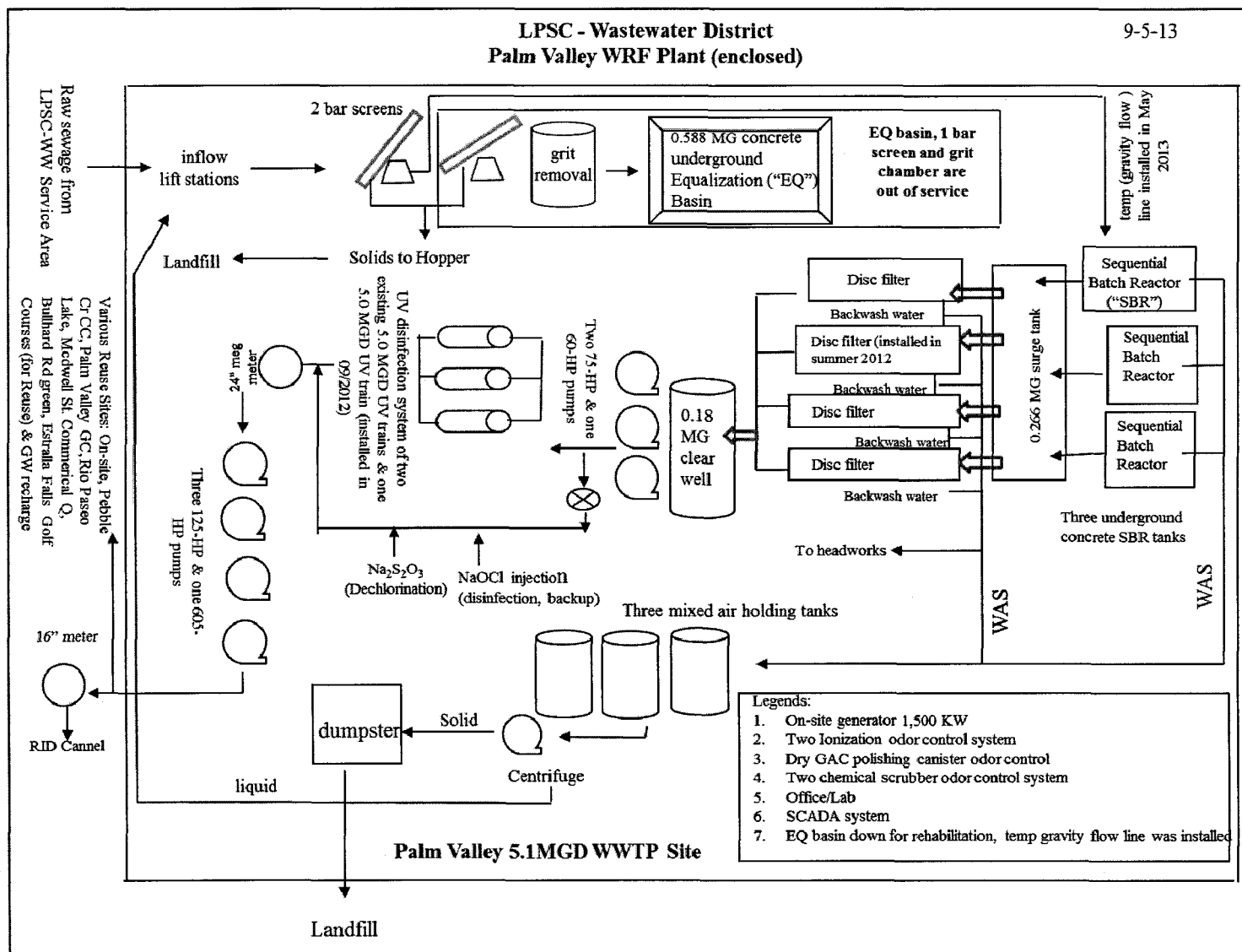


FIGURE 3B SYSTEMATIC DRAWING

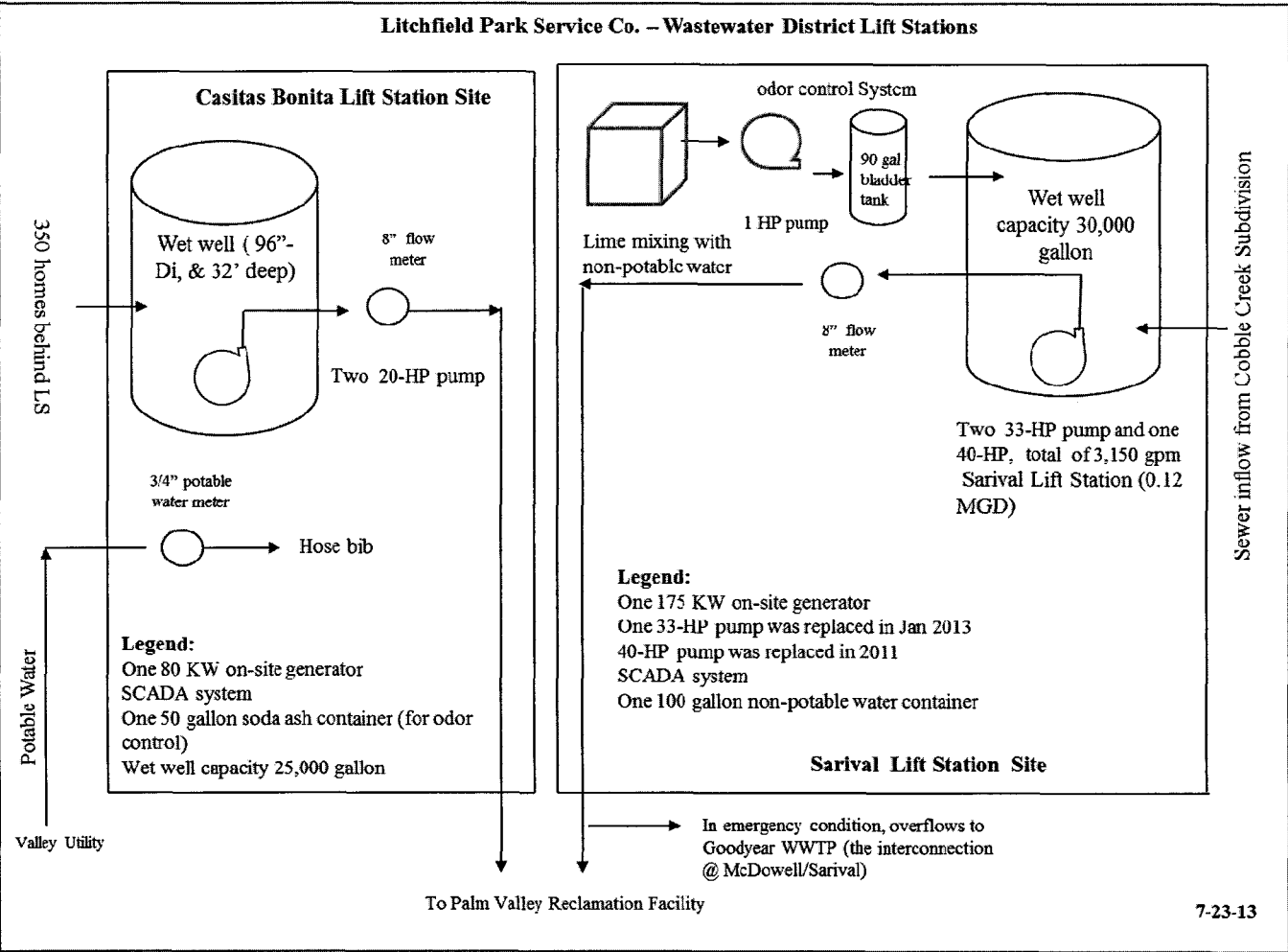


FIGURE 4

WASTEWATER FLOW IN LPSC-WW SERVICE AREA

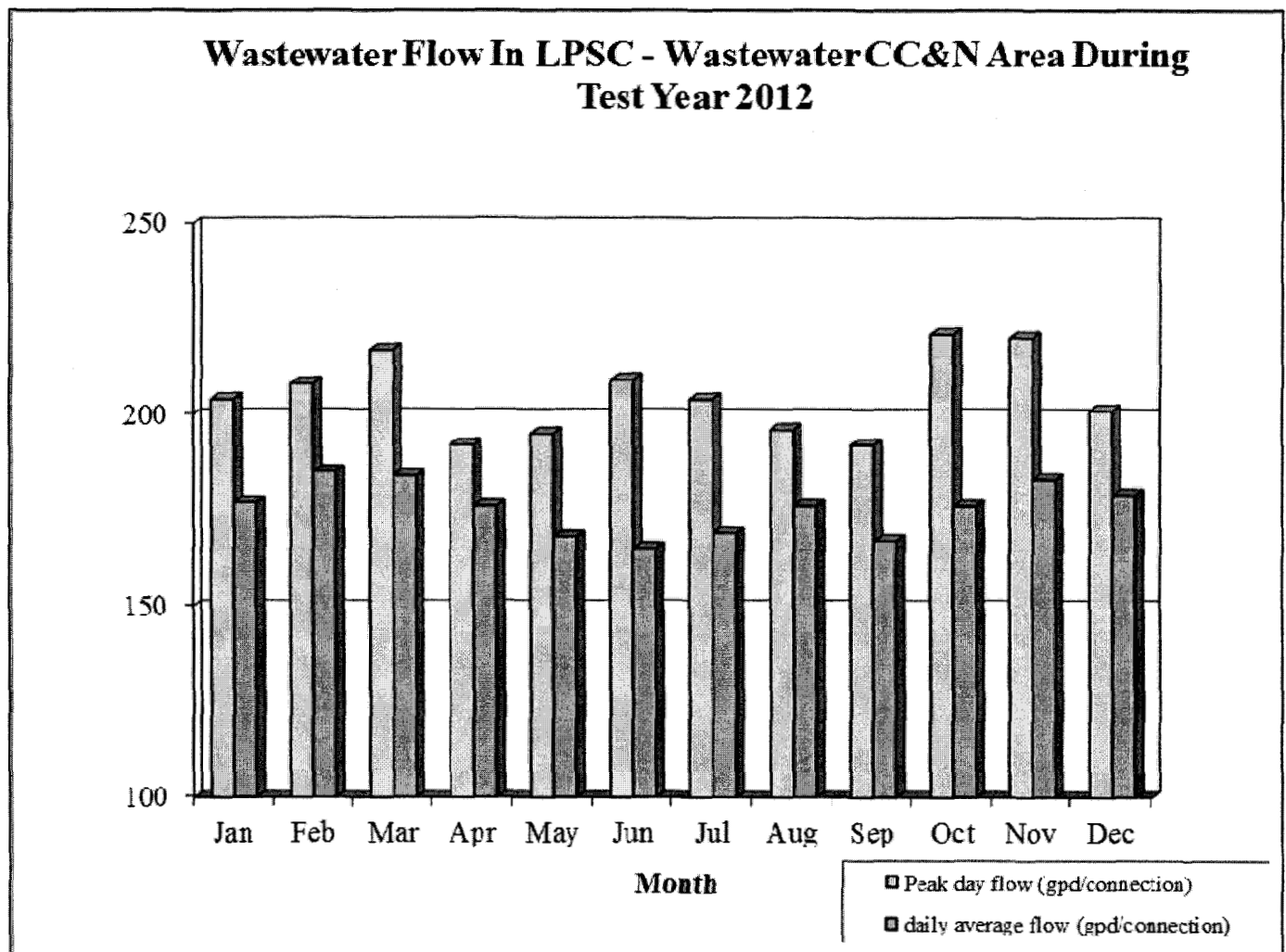


FIGURE 5

ACTUAL AND PROJECTED GROWTH IN LPSC-WW SERVICE AREA

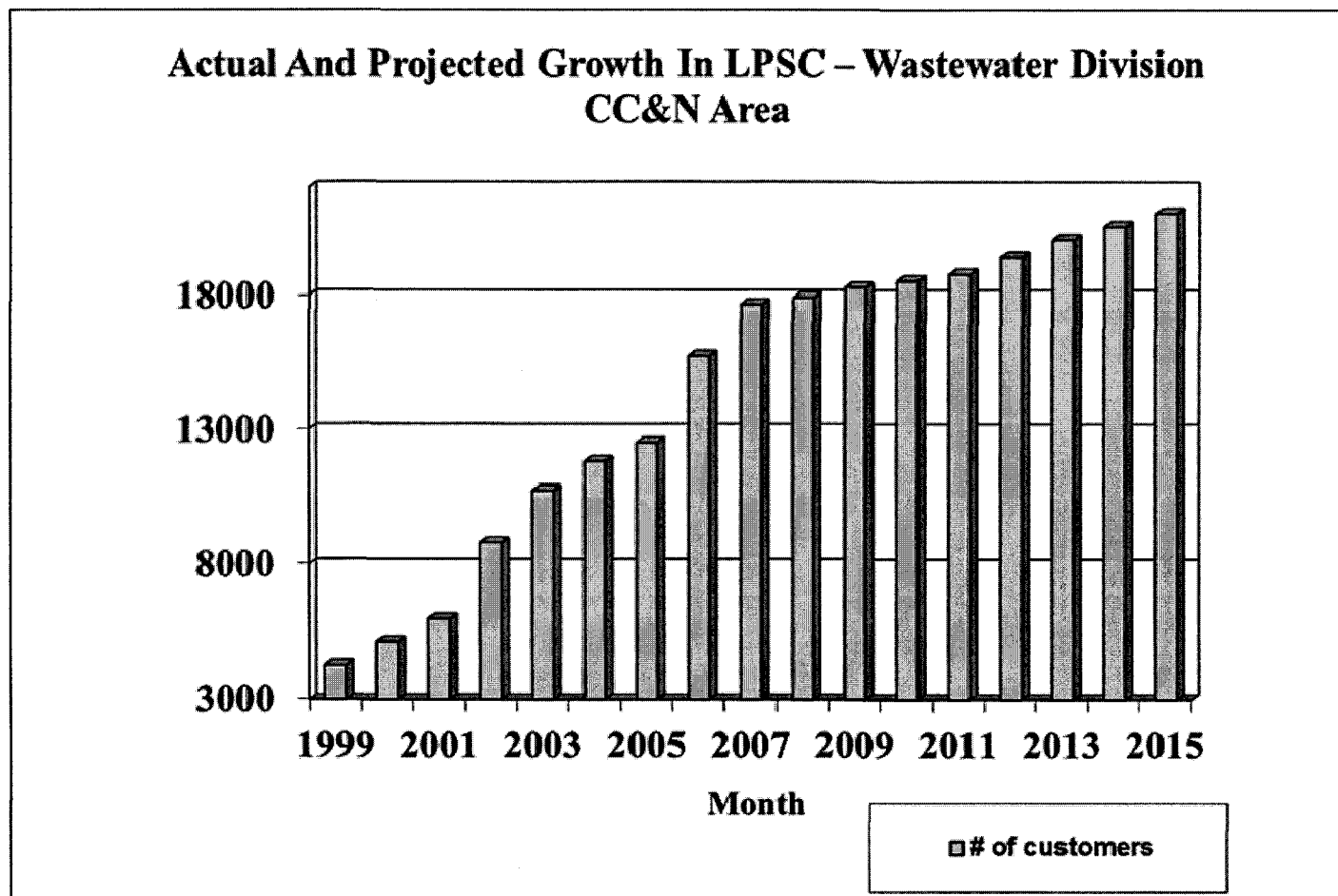


FIGURE 6

Depreciation Rates for LPSC-WW

NARU C Acct #	Depreciable Plant	Decision #72026	Co. Propos ed Rate (%)	Staff Recommen ded Rate (%)
351	Organization	0		0
352	Franchises	0		0
353	Land & Land Rights	0		0
354	Structure & Improvements	3.33	3.33	3.33
355	Power Generation Equipment	5.00	5.00	5.00
360	Collection Sewers - Force	2.00	2.00	2.00
361	Collection Sewers - Gravity	2.00	2.00	2.00
362	Special Collection Structures	2.00	2.00	2.00
363	Service to Connections	2.00	2.00	2.00
364	Flow Measuring Devices	10.00	10.00	10.00
365	Flow Measuring Installations	10.00	N/A	10.00
366	Reuse Services	2.00	2.00	2.00
367	Reuse Meters & Meter Installations	8.33	8.33	8.33
370	Receiving Wells	3.33	3.33	3.33
371	Pump Equipment	12.50	12.50	12.50
374	Reuse Distribution Reservoirs	2.50	2.50	2.50
375	Reuse Transmission and Distribution System	2.50	2.50	2.50
380	Treatment & Disposal Equipment	5.00	5.00	5.00
381	Plant Sewers	5.00	5.00	5.00
382	Outfall Sewer Lines	3.33	3.33	3.33
389	Other Plant & Misc. Equipments	6.67	6.67	6.67
390	Office Furniture & Equipments	6.67	6.67	6.67
390.1	Computer & Software	20.00	20.00	20.00
391	Transportation Equipments	20.00	20.00	20.00
392	Store Equipment	4.00	4.00	4.00
393	Tools, Shop, Garage Equipments	5.00	5.00	5.00
394	Lab Equipments	10.00	10.00	10.00
395	Power Operated Equipment	5.00	5.00	5.00
396	Communication Equipment	10.00	10.00	10.00
397	Miscellaneous Equipment	10.00	N/A	10.00
398	Other plants	---	10.00	10.00

ATTACHMENTS

DATA RESPONSES

REFERENCED

**LITCHFIELD PARK SERVICE COMPANY DBA LIBERTY UTILITIES
DOCKET NO. W-01427A-13-0043
RESPONSE TO STAFF'S FIRST SET OF DATA REQUESTS**

April 19, 2013

Response provided by: Christopher D. Krygier
Title: Utility Rates and Regulatory Manager
Company Name: Litchfield Park Service Company dba Liberty Utilities
Address: 12725 W. Indian School Road, Suite D101
Avondale, AZ 85392

Company Response Number: **DH – 1.6 [Supplement]**

Q. In Mr. Bourassa's Testimony, Exhibit of Schedule C-1, LPSCO Water stated that it paid \$33,649 in test year for water testing and then adjusted to \$66,942. Please explain why the adjustment is almost double its "book results".

ORIGINAL RESPONSE:

The Company is in a testing compliance year for its Water Division. A testing compliance year requires additional testing for more constituents than other years, necessitating a higher level of expense. The amount of \$66,942 is the 2013 budget for water testing expense. LPSCO will perform an analysis comparing water testing expense year over year analyzing the differences in testing expense levels and will supplement this response.

REVISED RESPONSE:

Please see the attached file labeled "DH 1.6 - (Water Sample Costs per Test)". This file details the number of testing samples and cost per sample the Company expects for 2013.

	A	B	C	D	E	F
1	Litchfield Park Service Company dba Liberty Utilities					
2	Docket No. W-01427A-13-0043					
3	Docket No. SW-01428A-13-0042					
4	2013 Sampling Costs					
5			[1]	[2]		[1] x [2]
6			# of Annual	Cost per		
7			Samples	Sample		
8		Arsenic	24	\$14		\$336
9		Nitrates	24	\$32		\$768
10		VOC	12	\$176		\$2,112
11		Radiochemical	12	\$280		\$3,360
12		TTHM / HAA5	24	\$275		\$6,600
13		TCR	480	\$13.50		\$6,480
14						
15		Arsenic				
16		Well 20B	208	\$14		\$2,912
17		Airline Well	208	\$14		\$2,912
18		Town Well	312	\$14		\$4,368
19						
20		Iron				
21		Airline Well	208	\$9		\$1,872
22						
23						
24		Sub-Total No. 1				\$31,720
25						
26		SOC	18	\$1,785		\$32,130
27		Asbestos	3	\$160		\$480
28		IOC	6	\$396		\$2,376
29		Lead & Copper	30	\$23		\$690
30						
31		Sub-Total No. 2				\$35,676
32						
33		Total				\$67,396
34		Requested Cost				\$66,942
35		Variance				\$454

**LITCHFIELD PARK SERVICE COMPANY DBA LIBERTY UTILITIES
DOCKET NOS. W-01427A-13-0043 AND SW-01428A-13-0042
RESPONSE TO STAFF'S FOURTH SET OF DATA REQUESTS**

June 3, 2013

Response provided by: Christopher D. Krygier
Title: Utility Rates and Regulatory Manager
Company: Litchfield Park Service Company dba Liberty Utilities
Address: 12725 W. Indian School Road, Suite D101
Avondale, AZ 85392

Company Response Number: DH – 4.10

**FOLLOWING QUESTIONS ARE RELATED TO THE COMPANY'S RESPONSE TO
DR # DH 1.6 & DR #DH 1.7**

Q. Please provide a list of all water testing related to compliance with water quality requirements for the Safe Drinking Water. For example listed below:

Monitoring parameter	Monitoring frequency
Nitrate (NO ₃)	1/year/# of POE
Asbestos	1/9 years/# of POE

RESPONSE:

Nitrates are tested quarterly from 5 EPDS/POE locations.

Asbestos is sampled once every nine years and was sampled from 3 EPDS/POE locations in 2012.

**LITCHFIELD PARK SERVICE COMPANY DBA LIBERTY UTILITIES
DOCKET NOS. W-01427A-13-0043 AND SW-01428A-13-0042
RESPONSE TO STAFF'S SIXTH SET OF DATA REQUESTS**

June 10, 2013

Response provided by: Christopher D. Krygier

Title: Utility Rates and Regulatory Manager

Company: Litchfield Park Service Company dba Liberty Utilities

Address: 12725 W. Indian School Road, Suite D101
Avondale, AZ 85392

Company Response Number: DH 6.1

**FOLLOWING QUESTIONS ARE RELATED TO THE COMPANY'S RESPONSE
TO DR # DH 1.9:**

- Q. After review the supporting document, Staff believes those expenses listed under 2009 NARUC account # 304 (Structure and Improvement) should be reclassified. Does the Company agree with the Staff reclassification?

ASSETINDEX	Vender	Project for	Expenses (\$)	(Reclassified to) NARUC account #
4487	Archer Western Co.	Well equipment for Well 34C	42,154.35	307 (Wells)
4290	Archer Western Co.	Town Well Arsenic Treatment Plant	41,625.00	320.1 (Water Treatment Plant)
4486	Archer Western Co.	Town Well Arsenic Treatment Plant	141,220.76	320.1 (Water Treatment Plant)
4536	Archer Western Co.	Town Well Arsenic Treatment Plant	85,478.32	320.1 (Water Treatment Plant)
4551	Archer Western Co.	Airline Reservoir	648,623.90	330.1 (Storage Tank)
4723	Bentley Systems	Design water CAD software	7,995.00	340.1 (Computers & Software)
4725	Brown Tank & Steel	Repainting two 12'x13' tanks	15,742.00	330.1 (Storage Tank)
4710	CH2OICE Pump Inc.	Well work & replace well pump	12,667.50	307 (Wells)
4602	Keller Equipment Co.	Well #5 & VFD	10,851.37	311 (Pumping Equipment)
4616	Optco Painting & Industrial Coatings	Town Well Arsenic Treatment Plant Vessel C & D rehab	7,000.00	320.1 (Water Treatment Plant)

ASSETINDEX	Vender	Project for	Expenses (\$)	(Reclassified to) NARUC account #
4608	Seven Trent Water Purification, Inc.	Media for arsenic treatment plant	12,491.86	320.1 (Water Treatment Plant)
4747	Southwest Ground Water Consultants, Inc.	Sampling & well log for Well #AL 6	5,852.95*	If it is invoice error, it should be reclassified to 307 (Wells)
4695	Water Works Engineers, LLC	Design and permit Well #AL 6	5,245.00*	If it is invoice error, it should be reclassified to 307 (Wells)

RESPONSE:

Yes, the Company agrees with the reclassification so long as the accumulated depreciation associated with each plant item is also reclassified.

**LITCHFIELD PARK SERVICE COMPANY DBA LIBERTY UTILITIES
DOCKET NOS. W-01427A-13-0043 AND SW-01428A-13-0042
RESPONSE TO STAFF'S ELEVENTH SET OF DATA REQUESTS**

July 22, 2013

Response provided by: Christopher D. Krygier

Title: Utility Rates and Regulatory Manager

Company: Litchfield Park Service Company dba Liberty Utilities

Address: 12725 W. Indian School Road, Suite D101
Avondale, AZ 85392

Company Response Number: DH 11-2

Q. The following questions are related to the Company's Response to DR # DH 1.12:

After review the supporting document, Staff believes those expenses listed below should be reclassified. The Company verbally agreed with Staff, when the subject was discussed during the June 19, 2013 meeting. Please confirm that LPSC still agrees with Staff.

A. Regarding to 2009 NARUC account # 354 (Structure and Improvement):

ASSETINDEX	Vender	Project for	Expenses (\$)	(Reclassified to) NARUC account #
4298	DL Norton General Construction	Palm Valley WRF upgrade	16,604.5	380 (Treatment and Disposal Equipment)
4535	DL Norton General Construction	Palm Valley WRF upgrade	283,971.1	380 (Treatment and Disposal Equipment)
4291	McBride Engineering	Palm Valley WRF upgrade	38,926.12	380 (Treatment and Disposal Equipment)
4683	Water Works Engineers	Palm Valley WRF upgrade	11,210	380 (Treatment and Disposal Equipment)
4684	Water Works Engineers	Palm Valley WRF upgrade	20,231.99	380 (Treatment and Disposal Equipment)
4685	Water Works Engineers	Palm Valley WRF upgrade	22,264.30	380 (Treatment and Disposal Equipment)
4686	Water Works Engineers	Palm Valley WRF upgrade	24,852.40	380 (Treatment and Disposal Equipment)
4687	Water Works	Palm Valley WRF	5,725	380 (Treatment and Disposal

	Engineers	upgrade		Equipment)
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B. Regarding to 2009 NARUC account # 380 (Treatment and Disposal Equipment):

ASSETINDEX	Vender	Project for	Expenses (\$)	(Reclassified to) NARUC account #
4588	HACH Co.	Palm Valley WRF upgrade	836.34	394 (Lab Equipment)
4292	Archer Western Co.	Installation of inflow flow meter	36,618	365 (flow measuring installation)

C. Regarding to 2009 NARUC account # 389 (Other Plant & Misc. Equipment):

ASSETINDEX	Vender	Project for	Expenses (\$)	(Reclassified to) NARUC account #
4573	Ludvik Elec	blower	5,047.8	371 (pumping equipment)
4561	Water Works Engineers	Palm Valley WRF upgrade	18,153.75	380 (Treatment and Disposal Equipment)
4564	Water Works Engineers	Palm Valley WRF upgrade	9,368.75	380 (Treatment and Disposal Equipment)
4566	Water Works Engineers	Palm Valley WRF upgrade	5,074.34	380 (Treatment and Disposal Equipment)
4565	Water Works Engineers	Palm Valley WRF upgrade	5,360	380 (Treatment and Disposal Equipment)

D. Referenced to 2012 NARUC account # 354 (Structure and Improvement):

ASSETINDEX	Vender	Project for	Expenses (\$)	(Reclassified to) NARUC account #
6877	DL Norton General Construction	SBR 3 piping modification	25,423	380 (Treatment and Disposal Equipment)
6804	McBride Engineering	APP for Palm Valley WRF	5,200	380 (Treatment and Disposal Equipment)
7196	Keller Electrical	18-HP pump	5,682.42	371 (Pumping Equipment)
7197	Phoenix Pumps, Inc	ABS 150 J-CH2 PE 250/6 Pump/Motor & 33-HP pump	23,454.67	371 (Pumping Equipment)

E. Referenced to 2012 NARUC account # 393 (Tools, Shop & Garage Equipment):

ASSETINDEX	Vender	Project for	Expenses (\$)	(Reclassified to) NARUC account #
6732	Qua-Aerobic System, Inc	Filter cloth sock-polyester pipe	15,681.39	380 (Treatment and Disposal Equipment)

F. Referenced to 2012 NARUC account # 395 (Power Operated Equipment):

ASSETINDEX	Vender	Project for	Expenses (\$)	(Reclassified to) NARUC account #
6725	Keller Electrical	100-HP pump	5,684.72	371 (Pumping Equipment)
6726	Phoenix Pumps, Inc.	blower	15,800	371 umping Equipment)

RESPONSE:

Yes, the Company agrees with the reclassification so long as the accumulated depreciation associated with each plant item is also reclassified.